

1/105

**FIGURE 1**

ATGGCTTTAGAGATCCACATGTCAGACCCCATGTGCCTCATCGAGAACTTTAATGAGCAGCTGAAGGTTAATCAG  
GAAGCTTTGGAGATCCTGTCTGCCATTACGCAACCTGTAGTTGTGGTAGCGATTGTGGGCCTCTATCGCACTGGC  
AAATCCTACCTGATGAACAAGCTGGCTGGGAAGAAACAAGGGCTTCTCTGTTGCATCTACGGTGCAGTCTCACACC  
AAGGGAATTTGGATATGGTGTGTGCCTCATCCCAACTGGCCAAATCACACATTAGTTCTGCTTGACACCGAGGGC  
CTGGGAGATGTAGAGAAGGCTGACAACAAGAATGATATCCAGATCCTTTGCACTGGCACTCTTACTGAGCAGCACC  
TTTGTGTACAATACTGTGAACAAAATTGATCAGGGTGCTATCGACCTACTGCACAATGTGACAGAAGTGCAGAT  
CTGCTCAAGGCAAGAACTCACCCGACCTTGACAGGGTTGAAGATCCTGCTGACTCTGCGAGCTTCTTCCAGAC  
TTAGTGTGGACTCTGAGAGATTTCTGCTTAGGCCTGGAAATAGATGGGCAACTTGTACACCAGATGAATACCTG  
GAGAATTCCCTAAGGCCAAAGCAAGGTAGTGATCAAAGAGTTCAAATTTCAATTTGCCTCGTCTGTGTATACAG  
AAGTTCTTTCCAAAAAAGAAATGCTTTATCTTTGACTTACCTGCTCACCAAAAAAGCTTGCCCAACTTGAAACA  
CTGCCTGATGATGAGCTAGAGCCTGAATTTGTGCAACAAGTGACAGAATTCTGTTCTACATCTTTAGCCATTCT  
ATGACCAAGACTCTTCCAGGTGGCATCATGGTCAATGGATCTCGTCTAAAGAACCCTGGTGCTGACCTATGTCAAT  
GCCATCAGCAGTGGGGATCTGCCTTGCTATAGAGAAATGCAGTCTGCGCTTGCTCAGAGAGAGAACTCAGCTGCA  
GTGCAAAAGGCCATTGCCCCTATGACCAGCAAATGGGCCAGAAAGTGACAGCTGCCCATGGAAACCCTCCAGGAG  
CTGCTGGACCTGCACAGGACCAGTGAGAGGGAGGCCATTGAAGTCTTCATGAAAACTCTTTCAAGGATGTAGAC  
CAAAGTTTCCAGAAAGAATTGGAGACTCTACTAGATGCAAAACAGAATGACATTTGTAAACGGAACCTGGAAGCA  
TCTCGGATTATTGCTCGGCTTTACTTAAGGATATTTTGGTCCTCTAGAAGAAGCAGTGAAGCAGGGAATTTAT  
TCTAAGCCAGGAGGCCATAATCTCTTCATTGAGAAAACAGAAGAACTGAAGGCAAAGTACTATCGGGAGCCTCGG  
AAAGGAATACAGGCTGAAGAAGTTCTGCAGAAATATTTAAAGTCCAAGGAGTCTGTGAGTCATGCAATATTACAG  
ACTGACCAGGCTCTCACAGAGACGGAAGAAAAAGAAAGAGGCACAAGTGAAAGCAGAAGCTGAAAAGGCTGAA  
GCGCAAAGGTTGGCGGCGATTCAAAGGCAGAACGAGCAAATGATGCAGGAGAGGGAGAGACTCCATCAGGAACAA  
GTGAGACAAATGGAGATAGCCAAACAAAATTGGCTGGCAGAGCAACAGAAAATGCAGGAACAACAGATGCAGGAA  
CAGGCTGCACAGCTCAGCACAAACATTCCAAGCTCAAAATAGAAGCCTTCTCAGTGAGCTCCAGCACGCCCAGAGG  
ACTGTTAATAACGATGATCCATGTGTTTTACTCTAA

2/105  
**FIGURE 2**

MALEIHMSDPMCLIENFNEQLKVNQEALEILSAITQPVVVVAIVGLYRTGKSYLMNKLAKGNKGFVASTVQSHT  
KGIWIWCVPHPNWPNTLVLLDTEGLGDVEKADNKNDIQIFALALLSSTFVYNTVKNIDQGAIDLLHNVTELD  
LLKARNSPDLDRVEDPADSASFPPDLVWTLRDFCLGLEIDGQLVTPDEYLENSLRPKQGSQVRVQNFNLPRLCIQ  
KFFPKKKCFIFDLPAHQKKLAQLETLPPDELEPEFVQQVTEFCSYIFSHSMTKTLPGGIMVNGSRLKNLVLTYVN  
AISSGDLPCIENAVLAQAQRENSAAVQKAIHYDQQMGQKVQLPMETLQELLDLHRTSERAIEVFMKNSFKDVD  
QSFQKELETLDDAKQNDICKRNLEASSDYCSALLKDIFGPLEEAVKQGIYSKPGGHNLFIQKTEELKAKYYREPR  
KGIQAEEVLQKYLKSKESVSHAILQTDQALTETEKKKKEAQVKAEAEKAEQAQLAAIQRQNEQMMQERERLHQEQ  
VRQMEIAKQNWLAEEQKMQEQMQEQAAQLSTTFQAQNRSLLELQHAQRTVNNDPCVLL

3/105  
**FIGURE 3**

AGCAGGTTTCGAATGCTCTTTACTTCCTTTGTGGAGCAAAAGAAAAAGCAGGAGTATTTGAACAAATCACTAAG  
ACTCATGGAACAATTATTGGCATTACTTCAGGGATTGTCTTGGTCCTTCTCATTATTTCTATTTTAGTACAAGTG  
AAACAGCCTCGAAAAAAGGTCATGGCTTGCAAAACCGCTTTTAATAAAACCGGGTTCCAAGAGTGTGTGATCCCT  
CCTCATTATGAAGTGTTCCTAAGGGACAAAGAGATTTCTGCAGACCTGGCAGACTTGTGCGAAGAATTGGAC  
AACTACCAGAGGATGCGGCGCTCCTCCACCGCCTCCCGCTGCATCCACGACCACCCTGTGGGTGCGAGGCCTCC  
AGCGTCAAACAAAGCAGGACCAACCTCAGTTCCATGGAGCTTCCCTCTCCGAAATGACTTTGCACAACCACAGCCA  
ATGAAAACATTTAATAGCACCTTCAAGAAAAGTAGTTACACTTTCAAACAGGGACATGAGTGCCCTGAGCAGGCC  
CTGGAAGACCGAGTAATGGAGGAGATTCCCTGTGAAATTTATGTGAGGGGCGAGAAGATTCTGCACAAGCATCC  
ATATCCATTGACTTCTAATCTTCTGCTAATGGTGATGTGAATTTCTAGGGTGTGTACGTACGCAGCCCTCCAGGGC  
ACCATACTGTTTCCAGCAGCCAACCCCTTTCTCCCATCACAACTACGAAGACCTTGATTTACCGTTAACCTATTG  
TATGGTGATGTTTTATTCTCTCAGGCAGTCTATATATGTTAAACCAATCAAGGAACCTTACTCTATTTCAGTGGAA  
ACAATAATCATCTCTATTGCTTGGTGTCATTTATAGGAAGCACTGCCAGTTAAAGAGCATTAGAAGAGGTGGTTG  
GATGGAGCCAGGCTCAGGCTGCCTCTTCGTTTTAGCAACAAGAACTGCTCTTGACTGATAACAGCTCTGTCAA  
TATTTTGATGCCACAATAAACTTGATTTTCTTTACATTCCCTTTTATTTTCTCTTCTCTAAATTTAATTTGTTT  
TATAAGCCTATCGTTTTACCATTTTCAATTTTCTTACATAAGTACAAAGTGGTTAATGTACCACATACTTCAGTATAG  
GCATTTGTTCTTGAGTGTGTCAAAATACAGCTAGTTACTGTGCCAATTAAGACCCAGTTGTATTTACCCATCTG  
TTTCTTCTGGCTAATCTCTGTACTTCTGCCTTTTAATTAAGTGGGCCCTTATTCCTTATTTTCTGTGAGAAATAA  
TAGATGATATGATTTATTACCTTTCAATTATATTTTCTCAGTTATACTAGAAAATTTTATAATCCTGGGATATA  
TGTACCATGTGCAGCTATGACTAAAAATTTGAAAAAGATAAAAAATTTCTAGCAAGCCTTTGAAGTTTACCAAGTA  
TAGTCACATTCAGTGACAGCCCATTCATTCCAGTAAAGAATCATTTCATTCACCTTTGGGAGAGGCCTATAATTAC  
ATTTATTTGCAATGTTTCTCTTCGCTAGATTGTTACATAGCTCCCATTTCTGTTGGTTTTGCTTACAGCATATGGT  
AACCAAGGTTAGATGCCAGTTAAAATTCCTTAGAAATTTGGATGAGCCTTGAGATTGCTTCTTAACTGGGACATGA  
CATTTTCTAGCTCTTATCAAGAATAACAACCTTCCACTTTTTTTTAACTGCATTTTGAATTTTTTATGGTAT  
AAAAACAATAATTTATAAACATAAAAGCTCATTGTGTTTTTGAAGTTTGTATATTATTTGATACTGTACAACT  
TTATTAAATCAAGATGAAAGACCTACAGGACAGATTCCCTTTCAGTGTTTACATCAGTGGCTTTGTATGCAAATAT  
GCTGTGTTGGACCTGGACGCTATAACTTATTGTAAAGACCTTGGAAATGTGGACATAAGCTCTTTCTTTCTTTT  
GTTACTGTATTTAGTTTGTGATAAATTTTCACTGTGTGATATTTATGCTCTAAATCACTACACAAATCCCATAT  
TAAATATACATTGTACCTGACCCTTTAATCATGTTATTTATGCCACCAAGGTTGTGGATCTTAAGGTATGTATG  
GAAAGGAACCTATTTATCAAATTGTAAGTAATACAGACATGCCATTTAAAGAGGTAAATTTCTGTTTTCTATAT  
TTTGTTAGTAAATTTCTCAATGAAATAAGTTGAAGTTTCACTGGATTTTCAATTAATTTTAAATATTACATATATGT  
GTTTTCTCAGATTAGTGAAAATTTGTGACCTTAAATTTAATACACATATACTGCCTCAG

4/105  
**FIGURE 4**

MLFTSFVEQKKKAGVFEQITKTHGTIIGITSGIVLVLLIISILVQVKQPRKKVMACKTAFNKTGFQEVFDPPHYE  
LFSLRDKEISADLADLSEELDNYQRMRRSSTASRCIHDHHCQSQASSVKQSRTNLSSMELPLRNDFAQPQPMKTF  
NSTFKKSSYTFKQGHECPEQALEDRVMEEIPCEIYVRGRED SAQASISIDF

5/105  
**FIGURE 5**

TCTGGGCGCGCGCGACGTCAGTTTGTGTTCTGTGTCTCCCCGCCCCTGTCCCGCCCGACCCGCGCCCGCGATGC  
TGGCGCTGCGCTGCGGCTCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCGCGG  
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCCCTTCTCTCTCTCCCGGAACCCGCTCGTGTACCTGGACG  
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGCTGGAGCTGAAGGCAGATGTCGTCCCAAAGACAGCTGAGA  
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTCCACAGGGTGATCCCTTCCT  
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG  
ACGAGAACTTTACTGAAGCACGTGGGGCCAGGTGTCCTGTCCATGGCTAATGCTGGTCCTAACACCAACGGCT  
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTCCGGTCACGTCAAAGAGG  
GCATGGACGTCGTGAAGAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG  
ACTGTGGCCAGTTGAGCTTAACTCTGTGGCCAGGGTGCTGGCATGGTGGCAGCTGCAAAATGTCCATGCACCCAGGTG  
GCCGCGTTGGGCTGTCAGCCAAGGTGCCTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA  
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCTTAATACCCACCCTTCCTCACGACCTCA  
TTTCTGGGCATCTTGTGGACATGATGTCACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCAGCCCAGATTCTC  
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTGGCCATCCAAGTGAAAGTCTTTTCTTGACCAAGGGGGACAG  
TCAGTTTTGCAAAGGACTCTAATACCTGTTAATATTGTCTTCTTAATTGGGATAATTTAATTAACAAGATTGA  
CTAGAAGTGAACTGCAACACTAACTTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC  
AGAGCTTGGCTTTTGAAACACAACCTCAGGGCTTTTGTGAAGGTTCCCCGCTGAGATCTTCTCTCTGGTTACTG  
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGAGGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA  
CCTCACTTGAGCTGTGCCTAGACAATGTGAATTCCGTGTGTTGCTAACAGAAGTGGCCTGTAAGCTCCTGTGCTCC  
GGAGGGAAGCATTTCTGGTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATTCAATCTACTCATGATGTGTTATG  
CATAAAACATTTCTGGAACATGGATTTGTGTTACCTTAAATGTGAAAATAAATCCTATTTTCTATGGAAAAAA  
AAAAAAAAAAAAAAAA

6/105

**FIGURE 6**

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA  
ENFRALCTGEKGFGYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPVLSMANAGPNTN  
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

7/105  
**FIGURE 7**

TGTTCTTGAGCCCAGCTTCTTCTCGTCTCCACCCCAGCTTCCCGGCATTGGAAGAAGGGACCGTCTCTTCCTT  
GTCTTGGCCACCCAAATCCTGGTATCGAAAGGGTTGAACGGACCGGAAGTGTGCAGCAGCGACGGGTCCCCAGCT  
AATCGACGCCGGAAGTAGCAATTACTAGACAAGCATTCCGCCGCCGGCTTCGCTATGGCGGCAATTCCCCCAGAT  
TCCTGGCAGCCACCCAACGTTTACTTGGAGACCAGCATGGGAATCATTGTGCTGGAGCTGTACTGGAAGCATGCT  
CCAAAGACCTGTAAGAACTTTGCTGAGTTGGCTCGTCGAGGTTACTACAATGGCACAAAATTCCACAGAATTATC  
AAAGACTTCATGATCCAAGGAGGTGACCCAACAGGGACAGGTCGAGGTGGTGCATCTATCTATGGCAAACAGTTT  
GAAGATGAACCTTCATCCAGACTTGAAATTCACGGGGGCTGGAATTCTCGCAATGGCCAATGCGGGGCCAGATACC  
AATGGCAGCCAGTTCTTTGTGACCCTCGCCCCACCCAGTGGCTTGACGGCAAACACACCATTTTTGGCCGAGTG  
TGTCAGGGCATAGGAATGGTGAATCGCGTGGGAATGGTAGAAACAACTCCAGGACCGCCCTGTGGACGACGTG  
AAGATCATTAAAGGCATACCCTTCTGGGTAGACTTGCTACCCTCTTGAGCAGCTCTTCTGAGATGGCCCCAGTGAA  
CCAGCTTCTAGATGACATAGAATGACATGTAATGCTAAATTTCATTTTGGCTTTGCAAGTCATGAAGCTTAGGAG  
GCCTGGCATCTTGGGTGAGTTAGAGATGGAAGTACATTTTAATAGGATGCTTCTTTCTCTTCCCCCAGTGCCTA  
GGTTGCCAGAGCATTTGCACAAATGCCCTGTTTATCAATAGGTGACTACTTACTACACATGAACCATAATGCTG  
CTTCTTGTGCATGTCTGCTCTGATATACGTGCAACAATGTAGCAGCCACTGTCAATTTCTCAGTGGTTTTGCCTAA  
CCAACTTCTTCCCTAAGGAGATTTATATTCTGGCCTACACAGCAGTCCTTGATGGCTGACAGCCACAGAATTCCA  
AACCAAGTAGTGTCTGTGACGCCCTCTTAACCTCTGTGCACGCCCTATTTCACTCTTTTACATTTGTTCTTCTAGGG  
AATGTATGCATCTCTATATATATTTTTCCCTCTCAAAACCAGAACATCAACAGTGCTGTTTCTGACACTTCAGACA  
TCCCACGCAAAGCCACATTGAATTTTTGCCAAATGAAAAACACATCCAACAATCAAGTTTCTAAGAAGGTGTCAA  
GTGGGGAATAATAATAATGTATAATAATCAAGAAATTAGTTTATTAAGGAAGCAGAAGCATTGACCATTTTTT  
CCCAGAGAAGAGGAGAAATCTGTAGTGAGCAAAGGACAGACCATGAATCCTCCTTGAGAAGTAGTACTCTCAGAA  
AGGAGAAGCGCCACTCAAGTTCTTTTAACCAAGACTTTAGAGAAATTAGGTCCAAGATTTTTATATGTTTCAGTT  
GTTTATGTATAAAAAATAACTTTCTGGATTTTGTGGGGAGGAGCAGGAGAGGAAGGAAGTTAATACCTATGTAATA  
CATAGAACTTCCACAATAAAATGCCATTGATGGTGAAAAAAAAAAAAAAAAAAAAAA

8/105  
**FIGURE 8**

MAAIPDPSWQPPNVYLETSMGIIVLELYWKHAPKTCKNFAELARRGYNGTKFHRI IKDFMIQGGDPTGTGRGGA  
SIYGKQFEDELHPDLKFTGAGILAMANAGPDTNGSQFFVTLAPTQWLDGKHTIFGRVCQGIGMVNRVGMVETNSQ  
DRPVDDVKI IKAYPSG



9/105  
**FIGURE 9**

GTAACGGATGGTGCGCCAACGTGAGAGGAAACCCGTGCGCGGCTGCGCTTTCCTGTCCCCAAGCCGTTCTAGACG  
CGGATGAAGTGCAAAACAACTTCTCCATAGAGGAGTTGTTGCAAAGTTCCAGTTTATACCAAACAGTAATCAGA  
TTCCATTGGAAGCTAAAGATTTTGAGAGCCTTTTGACTATATGCAACTAACTTGATTTCAGCTTGGAACCTT  
TAAAAAAACATTAAAGCAAAATGAAAAATGCTTCTGAAAGCAGCTCCTTTTGAAAGGTGTGATGCTTGGAAG  
CCATTTTCTGTGCTTTGATCCACTAATGCTAAGGACACATTAGGATTGGTCATGGAAATAGAAATGCACCACCATG  
AGCATCATCACCTACAAGCTCCTAACAAAGAAGATATCTTGAAAATTTTCAGAGGATGAGCGCATGGAGCTCAGTA  
AGAGCTTTCGAGTATACTGTATTATCCTTGTAACCCAAAGATGTGAGTCTTGGGCTGCAGTAAAGGAGACTT  
GGACCAAACACTGTGACAAAGCAGAGTTCTTCAGTTCTGAAAATGTTAAAGAGTTTGAGTCAATTAATATGGACA  
CAAATGACATGTGGTTAATGATGAGAAAAGCTTACAAATACGCCTTTGATAAGTATAGAGACCAATACAACCTGGT  
TCTTCCTTGACGCCCCACTACGTTTGCTATCATTGAAAACCTAAAGTATTTTTGTTAAAAAAGGATCCATCAC  
AGCCTTTCTATCTAGGCCACACTATAAAATCTGGAGACCTTGAATATGTGGGTATGGAAGGAGGAATTGTCTTAA  
GTGTAGAATCAATGAAAAGACTTAACAGCCTTCTCAATATCCCAGAAAAGTGCCTGAACAGGGAGGGATGATTT  
GGAAGATATCCGAAGATTAACAGCTAGCAGTTTGCCTGAAATATCCTCGAGTATTTGCAGAAAATGCAGAAGATG  
CTGATGGAAAAGATGTATTTAATACCAAATCTGTTGGGCTTTCTATTAAAGAGGCAATGACTTATACCCCAACC  
AGGTAGTAGAAGGCTGTTGTTTCAGATATGGCTGTTACTTTTAATGGACTGACTCCAAATCAGATGCATGTGATGA  
TGTATGGGGTATACCGCCTTAGGGCATTGGGCATATTTCAATGATGCATTGGTTTTCTTACCTCCAAATGGTT  
CTGACAATGACTGAGAAGTGGTAGAAAAGCGTGAATATGATCTTTGTATAGGACGTGTGTTGTCATTATTTGTAG  
TAGTAACTACATATCCAATACAGCTGTATGTTTCTTTTCTTTTCTAATTTGGTGGCACTGGTATAACCACCCAT  
TAAAGTCAGTAGTACATTTTTAAATGAGGGTGGTTTTTTCTTTTAAACACATGAACATTGTAAATGTGTTGGAA  
AAAAGTGTTTTAAGAATAATAATTTTGCAATAAACTATTAATAAATATTATATGTGATAAATTCTAACC

10/105  
**FIGURE 10**

MHHHEHHHLQAPNKEDILKISEDERMELSKSFRVYCIILVKPKDVSLWAAVKETWTKHCDKAEFFSSENVKEFES  
INMDTNDMWLMMRKAYKYAFDKYRDQYNWFFLARP TTFAI IENLKYFLLKKDPSQPFYLGHTIKSGDLEYVGMEG  
GIVLSVESMKRLNSLLNIPEKCPEQGGMWIKISEDKQLAVCLKYAGVFAENAEDADGKDVFNKSVGLSIKEAMT  
YHPNQVVEGCCSDMAVTFNGLTPNQMHVMMYGVYRLRAFGHIFNDALVFLPPNGSDND

11/105  
**FIGURE 11**

TCAGTGGGCGTCGCGCGAAGGCTAAGGGAGTGTGGCGGGCGGCTCCGGGAGCCAACATGCCTCGGTATGCGCAGC  
TGGTCATGGGCCCCGCGGGCAGCGGGAAGAGCACCTACTGTGCCACCATGGTCCAGCACTGTGAAGCCCTCAACC  
GGTCTGTCCAAGTTGTAAACCTGGATCCAGCAGCAGAACACTTCAACTACTCCGTGATGGCTGACATCCGGGAAC  
TGATCGAGGTGGATGATGTAATGGAGGATGATTCTCTGCGATTCCGTCCCAACGGAGGATTGGTATTTTGCATGG  
AGTACTTTGCCAATAATTTTACTGGCTGGAGAACGTCTTGCCCATGTAGAGGACGACTATATCCTTTTGTATT  
GTCCAGGTGAGATTGAGTTGTACACTCACCTGCCTGTGATGAAACAGCTGGTCCAGCAGCTCGAGCAGTGGGAGT  
TCCGAGTCTGTGGAGTTTTTCTTGTTGATTCTCAGTTCATGGTGGAGTCATTCAAGTTTATTTCTGGCATCTTGG  
CAGCCCTGAGTGCCATGATCTCTCTAGAAATTCGCAAGTCAACATCATGACAAAAATGGATCTGCTGAGTAAAA  
AAGCAAAAAAGGAAATTGAGAAATTTTAGATCCAGACATGTATTCTTTATTAGAAGATTCTACAAGTGACTTAA  
GAAGCAAAAAATTCAAGAACTGACTAAAGCTATATGTGGACTGATTGATGACTACAGCATGGTTTCGATTTTAC  
CTTACGATCAGTCAGATGAAGAAAGCATGAACATTGCATTGCAGCATATTGATTTTGCCATTCAATATGGAGAAG  
ACCTAGAATTTAAAGAACCAAAGGAACGTGAAGATGAGTCTTCCTCTATGTTTGACGAATATTTCAAGAATGCC  
AGGATGAATGAAGAGTTTACTAAAAGTAACCATCTAAAGAGCTTGTGGCCAAACCAGCAGAACATTCTTCTCTTC  
AAAGGATGCAATAGTAGAAAGCTACTTATTTTAATGAAAAAAGTAAACTTCGTTCTTTATCAGCCTCATGCCT  
GAATCAAATTTTAAATTATTCTGAACTGCTGCTGTTTAAAGTGGAAATCTTTTAGTATTATAACAGCATCACTTT  
AGATTTTGTAAGTCAAATTTGAAATGAATGCACATAGATTTATATATAAATTAGCACCTGAGCTAAGGTTAAGGC  
TGGTCTAACTTATTTTCACTTTTGTATTATTTTGGAGATGCAGGAATTACTGTAACAAAATATGTATGTCCGA  
AGGGAAAAAGCTGCAAGGATATATATAAGACCACTGCTTATCTGTATCTTCCATTTTCTATATTGAAAATGTA  
TATTATTTATATACTTAAAAAGTAAAAATAACTATGTTTTGAGATATGTATGTGTATATATAAAAGAAACAAAG  
GTTTTTAATGATTCTTGGACCTAGATAACAAGTAAA  
AA

12/105  
**FIGURE 12**

MPRYAQLVMGPAGSGKSTYCATMVQHCEALNRSVQVVNLDPAAEHFNYSVMADIRELIEVDDVMEDDSLRFGPNG  
GLVFCMEYFANNFDWLENCLGHVEDDYILFDCPGQIELYTHLPVMKQLVQQLQWEFRVCGVFLVDSQFMVESFK  
FISGILAALSAMISLEIPQVNIMTKMDLLSKKAKKEIEKFDPDPMYSLLEDSTSDLRSKKFKKLTKAICGLIDDY  
SMVRFLPYDQSDEESMNIALQHIDFAIQYGEDLEFKPKEREDESSMFDEYFQECQDE

13/105  
**FIGURE 13**

CCGGGACAGCTCGCGGCCCCGAGAGCTCTAGCCGTCGAGGAGCTGCCTGGGGACGTTTGCCTTGGGGCCCCAGC  
CTGGCCCGGGTCACCCTGGCATGAGGAGATGGGCCTGTTGCTCCTGGTCCCGTTGCTCCTGCTGCCCCGGCTCCTA  
CGGACTGCCCTTCTACAACGGCTTCTACTACTCCAACAGCGCCAACGACCAGAACCTAGGCAACGGTCATGGCAA  
AGACCTCCTTAATGGAGTGAAGCTGGTGGTGGAGACACCCGAGGAGACCCTGTTACCTACCAAGGGGCCAGTGT  
GATCCTGCCCTGCCGCTACCGCTACGAGCCGGCCCTGGTCTCCCCGCGCGCTGTGCGTGTCAAATGGTGGAAGCT  
GTCGGAGAACGGGGCCCCAGAGAAGGACGTGCTGGTGGCCATCGGGCTGAGGCACCGCTCCTTTGGGGACTACCA  
AGGCCGCGTGCACCTGCGGCAGGACAAAGAGCATGACGTCTCGCTGGAGATCCAGGATCTGCGGCTGGAGGACTA  
TGGGCGTTACCGCTGTGAGGTCAATTGACGGGCTGGAGGATGAAAGCGGTCTGGTGGAGCTGGAGCTGCGGGGTGT  
GGTCTTTTCCTTACAGTCCCCAACGGGCGCTACAGTTCAACTTCCACGAGGGCCAGCAGGTCTGTGCAGAGCA  
GGCTGCGGTGGTGGCCTCCTTTGAGCAGCTCTTCCGGGCCTGGGAGGAGGGCCTGGACTGGTGCAACGCGGGCTG  
GCTGCAGGATGCCACGGTGCAGTACCCCATCATGTTGCCCGGCAGCCCTGCGGTGGCCCGGGCCTGGCACCTGG  
CGTGCGAAGCTACGGCCCCCGCCACCGCCGCTGCACCGCTATGATGTATTCTGCTTCGCTACTGCCCTCAAGGG  
GCGGGTGTACTACCTGGAGCACCCCTGAGAAGCTGACGCTGACAGAGGCAAGGGAGGCCTGCCAGGAAGATGATCC  
CACGATCGCCAAGGTGGGACAGCTCTTTGCCGCCTGGAAGTTCCATGGCCTGGACCGCTGCGACGCTGGCTGGCT  
GGCAGATGGTAGCGTCCGCTACCCGTGTTGTTACCCGCATCCTAACTGTGGGCCCCCAGAGCCTGGGGTCCGAAG  
CTTTGGCTTCCCCGACCCGCAGAGCCGCTTGACGGTGTCTTACTGCTACCGCCAGCACTAGGACCTGGGGCCCTC  
CCCTGCCGCAATCCCTCACTGGCTGTGTATTTATTGAGTGGTTCGTTTTCCCTTGTGGGTGGAGCCATTTTAAC  
TGTTTTTATACTTCTCAATTTAAATTTTCTTTAAACATTTTTTTACTATTTTTTGTAAGCAAACAGAACCCAAT  
GCCTCCCTTTTGCTCCTGGATGCCCCACTCCAGGAATCATGCTTGTCTCCCCTGGGCCATTTGCGGTTTTGTGGGCT  
TCTGGAGGGTTCCCCGCCATCCAGGCTGGTCTCCCTCCCTTAAGGAGGTTGGTGCCAGAGTGGGCGGTGGCCTG  
TCTAGAATGCCGCCGGGAGTCCGGGCATGGTGGGCACAGTTCTCCCTGCCCCCTCAGCCTGGGGGAAGAAGAGGGC  
CTCGGGGGCCTCCGGAGCTGGGCTTTGGGCCTCTCCTGCCCACCTCTACTTCTCTGTGAAGCCGCTGACTGTAAC  
CCAGTTCTAGGCTTCCAGGCGAAAGCTGAGGGAAGGAAGAACTCCCCTCCCCGTTCCCCTTCCCCTCTCGGTTT  
CAAAGAATCTGTTTTGTTGTCAATTTGTTTCTCCTGTTTCCCTGTGTGGGGAGGGGCCCTCAGGTGTGTGTACTTT  
GGACAATAAATGGTGCTATGACTGCCTTCCGCCAAAAA

14/105  
**FIGURE 14**

MGLLLLVPLLLLPGSYGLPFYNGFYYSNSANDQNLGNGHGKDLLNGVKLVVETPEETLFTYQGASVILPCRYRYE  
PALVSPRRVRVKWWKLSENGAPEKDVLVAIGLRHRSFGDYQGRVHLRQDKEHDVSLEIQDLRLLEDYGRYRCEVID  
GLEDESGLVELELRGVVFPYQSPNGRYQFNFHEGQQVCAEQAAVVASFQLFRAWEEGLDWCNAGWLQDATVQYP  
IMLPRQPCGGPGLAPGVRSYGPRHRLHRYDVFCFATALKGRVYYLEHPEKLTLTAREACQEDDATIAKVGQLF  
AAWKFHGLDRCDAGWLADGSVRYPVVHPPNCGPPEPGVRSFGFPDPQSRLYGVYCYRQH

15/105  
**FIGURE 15A**

GGCGAGCTAAGCCGGAGGATGTGCAGCTGCGGCGGGCGGCGCCGGCTACGAAGAGGACGGGGACAGGCGCCGTGCG  
AACCGAGCCCAGCCAGCCGGAGGACGCGGGCAGGGCGGGACGGGAGCCCCGACTCGTCTGCCGCCGCCGTGCTCG  
CCGTCTGTGCCGGCCCCGCGTCCCCGCGCGCGAGCGGGAGGAGCCGCCGCCACCTCGCGCCCCGAGCCGCCGCTAGC  
GCGCGCCGGGCATGGTCCCCTCTTAAAGGCGCAGGCCGCGGCGGGCGGGGGCGGGCGTGCGGAACAAAGCGCCGGC  
GCGGGGCCCTGCGGGCGGCTCGGGGGGCCGCGATGGGCGCGGCGGGGCCCGCGGCGGGCGGGCGGCGCTGCCCGGGCCGG  
GCCTCGCGGCGCTAGGGCGGGCTGGCCTCCGCGGGCGGGGGCAGCGGGCTGAGGGCGCGCGGGGGCCTGCGGCGGC  
GGCGGCGGGCGGGCGGGCGGGCCCGCGGGCGGGAGCGGCGCGGGCATGGCGCGCGCGGGCCGGCGCGCCTGGCTCA  
GCGTGCTGCTCGGGCTCGTCTGGGCTTCGTGCTGGCCTCGCGGCTCGTCTGCCCGGGCTTCCGAGCTGAAGC  
GAGCGGGCCACGCGCGCGCCAGCCCCGAGGGCTGCCGGTCCGGGCAGGCGGCGGGCTTCCAGGCCGGCGGGG  
CGCGCGGCGATGCGCGCGGGGCGCAGCTCTGGCCGCCCGGCTCGGACCCAGATGGCGGGCCGCGCGACAGGAAGT  
TTCTCTTCGTGGGAGTCATGACCGCCAGAAATACCTGCAGACTCGGGCCGTGGCCGCTACAGAATGTTCCA  
AGACAATTCCTGGGAAAGTTCAAGTTCTTCTCAAGTGAGGGTTCTGACACATCTGTACCAATTCAGTAGTGCCAC  
TACGGGGTGTGGAGCACTCTACCCGCCCCAGAAAGTCTTTCATGATGCTCAAGTACATGCACGACCACTACT  
TGGACAAGTATGAATGGTTTTATGAGAGCAGATGATGACGTGTACATCAAAGGAGACCGTCTGGAGAAGTTCCTGA  
GGAGTTTGAACAGCAGCGAGCCCTCTTCTTGGGCAGACAGGCCTGGGCACCACGGAAGAAATGGGAAAAGTGG  
CCCTGGAGCCTGGTGAGAAGTCTGTCATGGGGGGGCTGGCGTGATCATGAGCCGGGAGGTGCTTCGGAGAATGG  
TGCCGCACATTGGCAAGTGTCTCCGGGAGATGTACACCACCATGAGGACGTGGAGGTGGGAAGGTGTGTCCGGA  
GGTTTGAGGGGTGCAGTGTGTCTGGTCTTATGAGATGCAGCAGCTTTTTTATGAGAATTACGAGCAGAACAAAA  
AGGGGTACATTAGAGATCTCCATAACAGTAAATTCACCAAGCTATCACATTACACCCCAACAAAAACCCACCT  
ACCAGTACAGGCTCCACAGCTACATGCTGAGCCGAAGATATCCGAGCTCCGCCATCGCACAAATACAGCTGCACC  
GCGAAATTGCTCTGATGAGCAAAATACAGCAACACAGAAATTCATAAGAGGACCTCCAGCTGGGAATCCCTCCCT  
CCTTCATGAGTTTTAGCCCCGCCAGCGAGAGGAGATTCTGGAATGGGAGTTTTCTGACTGGAAAATACTTGTATT  
CGGCAGTTGACGGCCAGCCCCCTCGAAGAGGAATGGACTCCGCCAGAGGGAAGCCTTGGACGACATTGTCTATGC  
AGGTCTAGGAGATGATCAATGCCAACGCCAAGACCAGAGGGCGCATCATTGACTTCAAAGAGATCCAGTACGGCT  
ACCGCCGGGTGAACCCCATGTATGGGGCTGAGTACATCTGGACCTGCTGCTTCTGTACAAAAAGCACAAAGGGA  
AGAAAATGACGGTCCCTGTGAGGAGGCACGCGTATTTACAGCAGACTTTCAGCAAAATCCAGTTTGTGGAGCATG  
AGGAGCTGGATGCACAAGAGTTGGCCAAGAGAATCAATCAGGAATCTGGATCCTTGTCTTTCTCTCAAAGTCCC  
TGAAGAAGCTCGTCCCCTTTTCACTCCCTGGGTGCAAGAGTGAGCACAAAGAACCCAAAGATAAAAAAGATAAACA  
TACTGATTCCCTTTGTCTGGGCGTTTTGACATGTTTTGTGAGATTTATGGGAAACTTTGAGAAGACGTGTCTTATCC  
CCAATCAGAACGTCAAGCTCGTGGTTCTGCTTTTCAATTCTGACTCCAACCCTGACAAGGCCAAACAAGTTGAAC  
TGATGACAGATTACCGCATTAAGTACCCTAAAGCCGACATGCAGATTTTGCCTGTGTCTGGAGAGTTTTCAAGAG  
CCCTGGCCCTGGAAGTAGGATCCTCCAGTTTAAACAATGAATCTTTGCTCTTCTTCTGCGACGTGACCTCGTCT  
TTACTACAGAATTCCTTCAGCGATGTGAGCAAAATACAGTTCTGGGCCAACAAATATATTTTCCAATCATCTTCA  
GCCAGTATGACCCAAAGATTGTTTTATAGTGGGAAAGTTCCAGTGACAACCATTTTGCCTTTACTCAGAAAAGT  
GCTTCTGGAGAACTATGGGTTTGGCATCACGTGTATTTATAAGGGAGATCTTGTCCGAGTGGGTGGCTTTGATG  
TTTCCATCCAAGGCTGGGGGCTGGAGGATGTGGACCTTTCAACAAGGTTGTCCAGGCAGGTTTGAAGACGTTTA  
GGAGCCAGGAAGTAGGAGTAGTCCACGTCCACCATCTGTCTTTTGTGATCCCAATCTTGACCCCAACAGTACA  
AAATGTGCTTGGGGTCCAAAGCATCGACCTATGGGTCCACACAGCAGCTGGCTGAGATGTGGCTGGAAAAAATG  
ATCCAAGTTACAGTAAAAGCAGCAATAATAATGGCTCAGTGAGGACAGCCTTAATGTCCAGCTTTGCTGGAAAAGA  
CGTTTTTAATTATCTAATTTATTTTTCAAAAAATTTTTGTATGATCAGTTTTTGAAGTCCGTATACAAGGATATA  
TTTTACAAGTGGTTTTCTTACATAGGACTCCTTTAAGATTGAGCTTTCTGAACAAGAAGGTGATCAGTGTGGCC  
TTTGAACACATCTTCTTGTGTAACATTATGTAGCAGACCTGCTTAACTTTGACTTGAAATGTACCTGATGAACAA  
AACTTTTTTAAAAAATGTTTTCTTTTGTAGACCTTTGCTCCAGTCCATGCGCAGAAAACGTGAACATTCCCTGCA  
AAGTATTATTGTAACAAAACACTGTAACCTCTGGTAAATGTTCTGTTGTGATTGTTAACATTCCACAGATTCTACC  
TTTTGTGTTTTGTTTTTTTTTTTTTACAATTGTTTTAAAGCCATTTTCATGTTCCAGTTGTAAGATAAGGAAATGT  
GATAATAGCTGTTTCATCATTGTCTTCAGGAGAGCTTTCAGAGTTGATCATTTCCCTCATGGTACTCTGCTCA  
GCATGGCCACGTAGGTTTTTTGTTTGTGTTTTGTTTTGTTCTTTTTTTGAGACGGAGTCTCACTCTGTTACCCAGGC  
TGGAATGCAGTGGCGCAATCTTGGCTCACTTTAACTCCACTCCCTGGTTCAAGCAATTCCTGCTTTGCTT

16/105  
**FIGURE 15B**

CCCGAGTAGCTGGGATTACAGGCACACACCACCACGCCAGCTAGTTTTTTTGTATTTTTAGTAGAGACGGGGTT  
TCACCATGCAAGCCCAGCTGGCCACGTAGGTTTTAAAGCAAGGGGCGTGAAGAAGGCACAGTGAGGTATGTGGCT  
GTTCTCGTGGTAGTTTCATTCGGCCTAAATAGACCTGGCATTAAATTTCAAGAAGGATTGGCATTCTCTCTT  
GACCCCTTCTCTTTAAAGGGTAAAATATTAATGTTTAGAATGACAAAGATGAATTATTACAATAAATCTGATGTAC  
ACAGACTGAAACACACACACATACACCCTAATCAAACGTTGGGGAAAAATGTATTTGGTTTTGTTTCCTTTTCATC  
CTGTCTGTGTTATGTGGGTGGAGATGGTTTTTCATTCTTTCATTACTGTTTTGTTTTATCCTTTGTATCTGAAATA  
CCTTTAATTTATTTAATATCTGTTGTTTCAGAGCTCTGCCATTTCTTGAGTACCTGTTAGTTAGTATTATTTATGT  
GTATCGGGAGTGTGTTTAGTCTGTTTTATTTGCAGTAAACCGATCTCCAAAGATTTCTTTTGAAACGCTTTTT  
CCCCTCCTTAATTTTTATATTCTTACTGTTTTACTAAATATTAAGTGTTCTTTGACAATTTTGGTGCTCATGTG  
TTTTGGGGACAAAAGTGAAATGAATCTGTCATTATACCAGAAAGTTAAATTCTCAGATCAAATGTGCCTTAATAA  
ATTTGTTTTTCATTTAGATTTCAAACAGTGATAGACTTGCCATTTTAATACACGTCATTGGAGGGCTGCGTATTG  
TAAATAGCCTGATGCTCATTGGAATAAACCAGTGAACAATATTTTCTATTGTACTTTTCAGAACCATTTT  
GTCTCATTATTCTGTTTTAGCTGAAGAATTGTATTACATTTGGAGAGTAAAAAACTTAAACACG



17/105  
**FIGURE 16**

MAARGRRAWLSVLLGLVLGFVLASRLVLPRASELKRAGPERRRASPEGCRSGQAAASQAGGARGDARGAQLWPPGS  
DPDGGPRDRNFLFVGVMTAQKYLQTRAVAAYRTWSKTIPGKVQFFSSEGS DTSVP IPVVPLRGVDDSYPPQKKSF  
MMLKYMHDHYLDKYEFMRADDDVYIKGDRLNENFLRSLNSSEPLFLGQTGLGTTEEMGKLALPGENFCMGGPGV  
IMSREVLRRMVPHIGKCLREMYTTTHEDVEVGRCVRRFAGVQCVWSYEMQQLFYENYEQNKKGYIRDLHNSKIHQA  
ITLHPNKNPPYQYRLHSYMLSRKISELRHRTIQLHREIVLMSKYSNTEIHKEDLQLGIPPSFMRFPQRQREEILE  
WEFLTGKYLYSAVDGQPPRRGMDSAQREALDDIVMQVMEMINANAKTRGRIIDFKEIQYGYRRVNP MYGAEYILD  
LLLLYKKHKGKKMTVPVRRHAYLQQTFSKIQFVEHEELDAQELAKRINQESGSLSF LSNLKKLVFPQLPGSKSE  
HKEPKDKKINILIPLSGRFDMFVRFMGNFEKTCLIPNQNVKLVVLLFNSDSNPDKAKQVELMTDYRIKYPKADMQ  
ILPVSGEFSRALALEVGSSQFNNESSLFFCDVDLVFTTEFLQRCRANTVLGQQIYFPIIFSQYDPKIVYSGKVPS  
DNHFAFTQKTGFWRNYGFGITCIYKGD LVRVGGFDVSIQGWGLEDVDLFNKVVQAGLKTFRSQEVGVVHVHHPVF  
CDPNLDPKQYKMCLGSKASTYGSTQQLAEMWLEKNDPSYSKSSNNNGSVRTA

18/105  
**FIGURE 17**

GCTGGAGCCGGGCCGGGGCGATGTGAGCGCGGGCCGCGGGCGGGGCTGCCTGGCCGGTGCTGTTGGGGCTGCTGC  
TGGCGCTGTTAGTGCCGGGCGGTGGTGCCGCCAAGACCGGTGCGGAGCTCGTGACCTGCGGGTCGGTGCTGAAGC  
TGCTCAATACGCACCACCGCGTGCGGCTGCACTCGCACGACATCAAATACGGATCCGGCAGCGGCCAGCAATCGG  
TGACCGGCGTAGAGGCGTCGGACGACGCGAATAGCTACTGGCGGATCCGCGGCGGGCTCGGAGGGCGGGTGCCCGT  
GCGGGTCCCCGGTGCGCTGCGGGCAGGCGGTGAGGCTCACGCATGTGCTTACGGGCAAGAACCTGCACACGCACC  
ACTTCCCGTCGCCCTGTCCAACAACCAGGAGGTGAGTGCCTTTGGGGAAGACGGCGAGGGCGACGACCTGGACC  
TATGGACAGTGCCTGCTCTGGACAGCACTGGGAGCGTGAGGCTGCTGTGCGCTTACAGCATGTGGGCACCTCTG  
TGTTCTGTGAGTCACGGGTGAGCAGTATGGAAGCCCCATCCGTGGGCAGCATGAGGTCCACGGCATGCCAGTG  
CCAACACGCACAATACGTGGAAGGCCATGGAAGGCATCTTCATCAAGCCTAGTGTGGAGCCCTCTGCAGGTCACG  
ATGAACCTCTGAGTGTGTGGATGGATGGGTGGATGGAGGGTGGCAGGTGGGGCGTCTGCAGGGCCACTCTTGGCAG  
AGACTTTGGGTTTGTAGGGGTCCTCAAGTGCCTTTGTGATTAAAGAATGTTGGTCTATGA

19/105  
**FIGURE 18**

MWSAGRGGAAWPVLLGLLLALLVPGGGAAKTGAELVTCGSVLKLLNTHHRVRLHSHDIKYGSGSGQQSVTGVEAS  
DDANSYWRIRGGSEGGPCGSPVRCGQAVRLTHVLTGKNLHTHHFPSPLSNNQEVSAFGEDGEGDDLDLWTVRCS  
GQHWEREAAVRLQHVGTSVFLSVTGEQYGSPIRGQHEVHGMP SANTHNTWKAMEGIFIKPSVEPSAGHDEL

20/105  
**FIGURE 19**

TCTCAGGGCTTCATACAGGAAATCTATTGCTGTGTCAAGTTCCAGAGAAAAGCTTCTGTTCTGTTCCAAGTTACTAA  
CCAGGCTAAACCACATAGACGTGAAGGAAGGGGCTAGAAGGAAGGGAGTGCCCCACTGTTGATGGGGTAAGAGGA  
TCCTGTACTGAGAAGTTGACCAGAGAGGGTCTCACCATGCGCACAGTTCTTCTGTACCTGTGTGGAGGAAAAGT  
ACTGAGTGAAGGGCAGAAAAAGAGAAAAACAGAAATGCTCTGCCCTTGGAGAACTGCTAACCTAGGGCTACTGTG  
ATTTTGACTATCTTCTTAGTGGCCGAAGCGGAGGGTGCTGCTCAACCAACAACCTCATTAAATGCTGCAAACCTAGC  
AAGGAGAATCATGCTTTAGCTTCAAGCAGTTTATGTATGGATGAAAAACAGATTACACAGAACTACTCGAAAAGTA  
CTCGCAGAAGTTAACACTTCATGGCCTGTAAAGATGGCTACAAATGCTGTGCTTTGTTGCCCTCCTATCGCATT  
AGAAATTTGATCATAATAACATGGGAAATAATCCTGAGAGGCCAGCCTTCCTGCACAAAAGCCTACAGGAAAGAA  
ACAAATGAGACCAAGGAAACCAACTGTACTGATGAGAGAATAACCTGGGTCTCCAGACCTGATCAGAATTCGGAC  
CTTCAGATTCGTCCAGTGGCCATCACTCATGACGGGTATTACAGATGCATAATGGTAACACCTGATGGGAATTTT  
CATCGTGGATATCACCTCCAAGTGTTAGTTACACCTGAACTGACCCTGTTTCAAAACAGGAATAGAAGTGCAGTA  
TGCAAGGCAGTTGCAGGGAAGCCAGCTGCGCAGATCTCCTGGATCCCAGAGGGCGATTGTGCCACTAAGCAAGAA  
TACTGGAGCAATGGCACAGTGAAGTGTAAAGAGTACATGCCACTGGGAGGTCCACAATGTGTCTACCGTGACCTGC  
CACGTCTCCCATTTGACTGGCAACAAGAGTCTGTACATAGAGCTACTTCCTGTTCCAGGTGCCAAAAAATCAGCA  
AAATTATATATTCCATATATCATCCTTACTATTATTATTTTGACCATCGTGGGATTCATTTGGTTGTTGAAAGTC  
AATGGCTGCAGAAAATATAAATTGAATAAAACAGAATCTACTCCAGTTGTTGAGGAGGATGAAATGCAGCCCTAT  
GCCAGCTACACAGAGAAGAACAATCCTCTCTATGATACTACAAACAAGGTGAAGGCATCTCAGGCATTACAAAGT  
GAAGTTGACACAGACCTCCATACTTTATTAAGTTGTTGGACTCTAGTACCAAGAAAACAACAACAAACGAGATACAT  
TATAATTACTGTCTGATTTTCTTACAGTTCTAGAAATGAAGACTTATATTGAAATTAGGTTTTCCAAGGTTCTTAG  
AAGACATTTTAATGGATTCTCATTACATACCCTTGTATAATTGGAATTTTTGATTCTTAGCTGCTACCAGCTAGTT  
CTCTGAAGAACTGATGTTATTACAAAGAAAATACATGCCCATGACCAAATATTCAAATTTGTGCAGGACAGTAAAT  
AATGAAAACCAATTTTCTCAAGAAATAACTGAAGAAGGAGCAAGTGTGAACAGTTTCTTGTGTATCCTTTTCAGA  
ATATTTTAATGTACATATGACATGTGTATATGCCTATGGTATATGTGTCAATTTATGTGTCCCCTTACATATACA  
TGCACATATCTTTGTCAAGGCACCAGTGGGAACAATACACTGCATTACTGTTCTATACATATGAAAACCTAATAA  
TATAAGTCTTAGAGATCATTTTATATCATGACAAGTAGAGCTACCTCATTCTTTTTAATGGTTATATAAAATTCC  
ATTGTATAGTTATATCATTATTTAATTAAAAACAACCTAATGATGGATATTTAGATTCTTTTAAGTTTTGTTTA  
TTTCTTTTAAGTTTTGTTTGTGGTATAAACAATACCACATAGAATGTTTCTTGTTCATATATCTCTTTGTTTTTG  
AGTATATCTGTAGGATAACTTTCTTGAGTGAATTGTCAGGTCAAAGGTTTGTGCATTTTACTATTGATATATA  
TGTTAAATTGTGTCAAATATATATGTCAAATTCCTTCCAACATTGTTTAAATGTGCCTTTCCCTAAATTTCTATT  
TTAATAACTGTACTATTCTTGCTTCTACAGTTGCCACTTTCTCTTTTAAATCAACCAGATTAAATATGATGTGAG  
ATTATAATAAGAATTATACTATTTAATAAAAAATGGATTTATA

21/105  
**FIGURE 20**

MLCPWRTANLGLLLILTIFLVAAEAGAAQPNNSLMLQTSKENHALASSSLCMDEKQITQNYSKVLAEVNTSWPVK  
MATNAVLCCPPIALRNLIITWEIILRGQPSTKAYRKETNETKETNCTDERITWVSRPDQNSDLQIRPVAITHD  
GYYRCIMVTPDGNFHRGYHLQVLVTPELTLFQNRNRRTAVCKAVAGKPAAQISWIPEGDCATKQEYWSNGTDTVKS  
TCHWEVHNVSTVTCHVSHLTGNKSLYIELLPVPGAKKSAKLYIPYIILTIIILTIVGFIWLLKVNGCRKYKLNKT  
ESTPVVEEDEMOPYASYTEKNNPLYDTTNKVKASQALQSEVDTDLHTL

22/105  
**FIGURE 21**

AAGGCTGTGGACCCCAGAGAAGGTGGCAGGTGGCCCCCTAGGAGAGCTCTGGGCACATTGCAATCTTCCCAAAC  
TCCAATAATAAAAATTGGAAGACTTTGGCAGAGAGTGTGTGTGTGTGTATGGTTGTTGGGCGTAGGACAGGTT  
TCGGGGATGCGCGGTACGCGGTACCACCCCTCGGAGGGCCCCACCCAGACGCCAGGCCGCTCCCCACTCCC  
CCTCAAGCAGCCCCAGCCGGGGACTTTCCGTGCGGGGAAGGGGCGGGGACCCTGAGCGAAAGGTGCGGAGGCGG  
CCTGCCGGGGTGGTTCCGCTTCCCGTTGCCGCTCGGGCGCTGTACCCAGAGCTCGAAGAGGAGCAGCGCGGCCG  
CGCGGACCCGGCAAGGCTGGGCGGACTCGGGGCTCCGAGGGACGCCATGCGGGGAGGCAGGGGCGCCCTTTC  
TGGCTGTGGCCGCTGCCAAGCTGGCGCTGCTGCCCTCTGTTGTGGGTGCTTTCCAGCGGACGCGTCCCCAGGGC  
AGCGCCGGGCCACTGCAGTGCTACGGAGTTGGACCCTTGGGCGACTTGAAGTGTCTGTTGGGAGCCTCTTGGGGAC  
CTGGGAGCCCCCTCCGAGTTACACCTCCAGAGCCAAAGTACCGTTCCAACAAAACCCAGACTGTGGCAGTGGCA  
GCCGGACGGAGCTGGGTGGCCATTCTCGGGAACAGCTCACCATGTCTGACAACTCCTTGTCTGGGGCACTAAG  
GCAGGCCAGCCTCTCTGGCCCCCGTCTTCGTGAACCTAGAAAACCCAAATGAAGCCAAACGCCCCCGGCTGGGC  
CCTGACGTGGACTTTTCCGAGGATGACCCCTGGAGGCCACTGTCCATTGGGCCCCACCTACATGGCCATCTCAT  
AAAGTTCTGATCTGCCAGTTCCACTACCGAAGATGTCAGGAGGCGGCCTGGACCCTGCTGGAACCGCAGCTGAAG  
ACCATACCCCTGACCCCTGTTGAGATCCAAGATTTGGAGCTAGCCACTGGCTACAAAGTGTATGGCCGCTGCCGG  
ATGGAGAAAGAAGAGGATTTGTGGGGCGAGTGGAGCCCCATTTTGTCTTCCAGACACCGCCTTCTGCTCCAAAA  
GATGTGTGGGTATCAGGGAACCTCTGTGGGACGCC TGGAGGAGAGGAACCTTTGCTTCTATGGAAGGCCCCAGGG  
CCCTGTGTGCAGGTGAGCTACAAAGTCTGGTTCTGGGTTGGAGGTCTGTGAGCTGAGTCCAGAAGGAATTACCTGC  
TGCTGCTCCCTAATTCCAGTGGGGCGGAGTGGGCCAGGGTGTCCGCTGTCAACGCCACAAGCTGGGAGCCTCTC  
ACCAACCTCTCTTTGGTCTGCTTGGATTACGCTCTGCCCCCCGTAGCGTGGCAGTCAGCAGCATCGCTGGGAGC  
ACGGAGCTACTGGTGACCTGGCAACCGGGGCTGGGGAACCACTGGAGCATGTAGTGGACTGGGCTCGAGATGGG  
GACCCCTGGAGAACTCAACTGGGTCCGGCTTCCCCCTGGGAACCTCAGTGCTCTGTTACCAGGGAATTTCACT  
GTGGGGTCCCCATATCGAATCACTGTGACCGCAGTCTCTGCTTCAGGCTTGGCCTCTGCATCCTCCGTCTGGGGG  
TTCAGGGAGGAATTAGCACCCCTAGTGGGGCCAACGCTTTGGCGACTCCAAGATGCCCCCTCCAGGGACCCCCGCC  
ATAGCGTGGGGAGAGGTCCCAAGGCACAGCTTCGAGGCCACCTCACCCTACACCTTGTGTGCACAGAGTGGGA  
ACCAGCCCCCTCCGTCTGCATGAATGTGAGTGGCAACACACAGAGTGTACCCCTGCCTGACCTTCCCTTGGGGTCCC  
TGTGAGCTGTGGGTGACAGCATCTACCATCGCTGGACAGGGCCCTCCTGGTCCCATCCTCCGGCTTCATCTACCA  
GATAACACCCTGAGGTGGAAGTTCTGCCGGGCATCCTATTCTTGTGGGGCTTGTTCCTGTTGGGGTGTGGCCTG  
AGCCTGGCCACCTCTGGAAGGTGCTACCACCTAAGGCACAAAGTGTGCCCCGCTGGGTCTGGGAGAAAGTTCCCT  
GATCCTGCCAACAGCAGTTTACGGCCAGCCCCACATGGAGCAAGTACCTGAGGCCAGCCCCCTTGGGGACTTGCCC  
ATCCTGGAAGTGGAGGAGATGGAGCCCCCGCGGTATGGAGTCTCCAGCCCGCCAGGCCACCGCCCCGCTT  
GACTCTGGGTATGAGAAGCACTTCTGCCCACACCTGAGGAGCTGGGCCTTCTGGGGCCCCCAGGCCACAGGTT  
CTGGCCTGGAACACACGCTCTGGCTGGGGGCTGCCAGCCAGGCTAGAGGGATGCTCATGCAGGTTGCACCCAGTC  
CTGGATTAGCCCTCTTGATGGATGAAGACACTGAGGACTCAGAGAGGCTGAGTCACTTACCTGAGGACACCCAGC  
CAGGCAGAGCTGGGATTGAAGGACCCCTATAGAGAAGGGCTTGGCCCCCATGGGGAAGACACGGATGGAAGGTGG  
AGCAAAGGAAAATACATGAAATTGAGAGTGGCAGCTGCCTGCCAAAATCTGTTCCGCTGTAACAGAACTGAATTT  
GGACCCAGCACAGTGGCTCAGCCTGTAATCCAGCACTTTGGCAGGCCAAGGTGGAAGGATCACTTAGAGCTA  
GGAGTTTGAGACCAGCCTGGGCAATATAGCAAGACCCCTCACTACAAAATAAAACATCAAAAACAAAACAATT  
AGCTGGGCATGATGGCACACACCTGTAGTCCGAGCCTTGGGAGGCTGAGGTGGGAGGATCGGTTGAGCCCAGG  
AGTTCGAAGCTGCAGGGACCTCTGATTGCACCACTGCACTCCAGGCTGGGTAACAGAATGAGACCTTATCTCAA  
AATAAACAACTAATAAAAAGCAAAAAAAAAAAAAAAAAAGAAAAGAAAAAACAATGCAATTTGGGCACCATCTCAGC  
TCCCTTGATCCAGGTGCAGCATGGACTGAGTTCTTGACAACAGAATGTGGTCAGAAGTGACATATGCCAACACG  
GGGTCTGGGTGGGGGCTCCCCACATCCTTTTCTTGCCTATGAGCTGGAACATAACACATGCCTATGATCCAGCT  
TTGGTCATACCCAAGGGGAAGGTGGAGCAAGAAATGAAAAGGAACCTGAATCCCTGAATGACTGCATGGATAGAA  
CCACTAAGAAAAATAAACTTTTATATTTTATA

23/105  
**FIGURE 22**

MRGGRGAPFWLWPLPKLALLPLLWVLFQRTRPQGSAGPLQCYGVGPLGDLNCSWEPLGDLGAPSELHLQSQKYRS  
NKTQTVAVAAGRSWVAIPREQLTMSDKLLVWGTKAGQPLWPPVFVNLETQMKPNAPRLGPDVDFSEDDPLEATVH  
WAPPTWPSHKVLICQFHYRRCQEAAWTLLEPELKT IPLTPVEIQDLELATGYKVYGRCRMEEKEDLWGEWSPILS  
FQTPPSAPKDVWVSGNLCGTPGGEEPLLWKAPGPCVQVSYKVWFVVGRELSPEGITCCCSLIPSGAEWARVSA  
VNATSWEPLTNLSLVCLDSASAPRSVAVSSIAGSTELLVTWQPGPGEPLEHVVDWARDGDPLEKLNWVRLPPGNL  
SALLPGNFTVGVPIRITVTAVSASGLASASSVWGFREELAPLVGPTLWRLQDAPPGTPAIAWGEVPRHQLRGHLT  
HYTLCAQSGTSPSVCNMVSGNTQSVTLPLDLPWGPCELWVTASTIAGQGPPGPILRLHLPDNTLRWKVLPGLFLW  
GLFLLGCGLSLATSGRCYHLRHKVLPRWVWEKVPDPANSSSGQPHMEQVPEAQPLGDLPILEVEEMEPVPMESS  
QPAQATAPLD SGYEKHFLPTPEELGLLGPPRPQVLA

24/105  
**FIGURE 23**

GGCACGAGGGCTGCCTGGCGCTGCGGGCGGCGGGCCATGGTGGTTTGGATTGAGCCGGGCGCGCGGGGCGCCG  
AGTCGGAGGGGGTGGCAGTGAGCGGCGGCAGAGGCTACGGGGCTCGGTTTGGCTGACTGGGGAGTCGGCAGGCGG  
CAGGAACCAATGCGAGGCCAGCGGAGCCTGCTGCTGGGCCCCGGCCCCCTCTGCCTCCGCCTCCTTCTGCTGCTGG  
GTTACAGGCGCCGCTGTCCACCTCTACTCCGGGGTCTAGTACAGCGCTGGCGCTACGGCAAGGTCTGCCTGCGCT  
CCCTGCTCTACAACCTCCTTTGGGGGCAGTGACACCGCTGTTGATGCTGCCTTTGAGCCTGTCTACTGGCTGGTAG  
ACAACGTGATCCGCTGGTTTGGAGTGGGCAGGAATGATATCGCCACCGTCTCCATCTGTAAGAAGTGCATTTACC  
CCAAGCCAGCCCGAACACACCACTGCAGCATCTGCAACAGGTGTGTGCTGAAGATGGATCACCCTGCCCCCTGGC  
TAAACAATTGTGTGGGCCACTATAACCATCGGTACTTCTTCTCTTTCTGCTTTTTCATGACTCTGGGCTGTGTCT  
ACTGCAGCTATGGAAGTTGGGACCTTTTCCGGGAGGCTTATGCTGCCATTGAGACTTATCACCAGACCCACCAC  
CCACCTTCTCCTTTTCGAGAAAGGATGACTCACAAGAGTCTTGTCTACCTCTGGTTCCTGTGCAGTTCTGTGGCAC  
TTGCCCTGGGTGCCCTAACTGTATGGCATGCTGTTCTCATCAGTCGAGGTGAGACTAGCATCGAAAGGCACATCA  
ACAAGAAGGAGAGACGTCGGCTACAGGCCAAGGGCAGAGTATTTAGGAATCCTTACAACCTACGGCTGCTTGGACA  
ACTGGAAGGTATTCTCTGGGTGTGGATACAGGAAGGCACTGGCTTACTCGGGTGCTCTTACCTTCTAGTCACTTGC  
CCCATGGGAATGGAATGAGCTGGGAGCCCCCTCCCTGGGTGACTGCTCACTCAGCCTCTGTGATGGCAGTGTAG  
CTGGACTGTGTGTCAGCCACGACTCGAGCACTCATTCTGCTCCCTATGTTATTTCAAGGGCCTCCAAGGGCAGCTTT  
TCTCAGAATCCTTGATCAAAAAGAGCCAGTGGGCC TGCCTTAGGGTACCATGCAGGACAATTCAAGGACCAGCCT  
TTTTACCACTGCAGAAGAAAGACACAATGTGGAGAAATCTTAGGACTGACATCCCTTTACTCAGGCAAACAGAAG  
TTCCAACCCAGACTAGGGGTCAGGCAGCTAGCTACCTACCTTGCCCAGTGCTGACCCGGACCTCCTCCAGGATA  
CAGCACTGGAGTTGGCCACCACCTCTTCTACTTGTGTCTGAAAAAACACCTGACTAGTACAGCTGAGATCTTGG  
CTTCTCAACAGGGCAAAGATAACCAGGCCTGCTGCTGAGGTCACTGCCACTTCTCACATGCTGCTTAAGGGAGCAC  
AAATAAAGGTATTTCGATTTTAAAGATAAAAAAAAAAAAAAAAAAAAA



25/105  
**FIGURE 24**

MRGQRSLLLGPRLCLRLLLLLLGYRRRCPPLLRGLVQRWRYGKVCLRSLLYNSFGGSDTAVDAAFEPPVYWLVDNV  
IRWFGVGRNDIATVSICKKCIYPKPARTHHCSICNRCVLKMDHHCPWLNNCVGHYNHRYFFSFCFFMTLGCVYCS  
YGSWDLFREAYAAIETYHQTPPPTFSFRERMTHKSLVYLWFLCSSVALALGALTVWHAVLISRGETSIERHINKK  
ERRRLQAKGRVFRNPYNYGCLDNWKVFLGVDTGRHWLTRVLLPSSHLPHGNGMSWEPPPWVTAHSASVMAV

26/105  
**FIGURE 25**

ACGAGGGGAGCTCCGGCTGCGTCTTCCCGCAGCGCTACCCGCCATGCGCCTGCCGCGCCGGGCCGCGCTGGGGCT  
CCTGCCGCTTCTGCTGCTGCTGCCGCCCGCGCCGGAGGCCGCCAAGAAGCCGACGCCCTGCCACCGGTGCCGGGG  
GCTGGTGGACAAGTTTAACCAGGGGATGGTGGACACCGCAAAGAAGAACTTTGGCGGCGGGAACACGGCTTGGA  
GGAAAAGACGCTGTCCAAGTACGAGTCCAGCGAGATTGCGCTGCTGGAGATCCTGGAGGGGCTGTGCGAGAGCAG  
CGACTTCGAATGCAATCAGATGCTAGAGGCGCAGGAGGAGCACCTGGAGGCCTGGTGGCTGCAGCTGAAGAGCGA  
ATATCCTGACTTATTCGAGTGGTTTTGTGTGAAGACACTGAAAGTGTGCTGCTCTCCAGGAACCTACGGTCCCGA  
CTGTCTCGCATGCCAGGGCGGATCCCAGAGGCCCTGCAGCGGGAATGGCCACTGCAGCGGAGATGGGAGCAGACA  
GGGCGACGGGTCTTGCCGGTGCCACATGGGGTACCAGGGCCCCGCTGTGCACTGACTGCATGGACGGCTACTTCAG  
CTCGCTCCGGAACGAGACCCACAGCATCTGCACAGCCTGTGACGAGTCCTGCAAGACGTGCTCGGGCCTGACCAA  
CAGAGACTGCGGCGAGTGTGAAGTGGGCTGGGTGCTGGACGAGGGCGCCTGTGTGGATGTGGACGAGTGTGCGGC  
CGAGCCGCTCCCTGCAGCGCTGCGCAGTTCTGTAAGAACGCCAACGGCTCCTACACGTGCGAAGATGTGGACGA  
GTGCTCACTAGCAGAAAAAACCTGTGTGAGGAAAAACGAAAACCTGCTACAATACTCCAGGGAGCTACGTCTGTGT  
GTGTCTGACGGCTTCGAAGAAACGGAAGATGCCTGTGTGCCGCCGGCAGAGCCTGAAGCCACAGAAGGAGAAAG  
CCCGACACAGCTGCCCTCCCGCGAAGACCTGTAATGTGCCGGACTTACCCTTTAAATTATTTCAGAAGGATGTCCC  
GTGGAAAAATGTGGCCCTGAGGATGCCGTCTCCTGCAGTGGACAGCGGCGGGGAGAGGCTGCCTGCTCTCTAACGG  
TTGATTCTCATTGTCCCTTAAACAGCTGCATTTC TTGGTTGTTCTTAAACAGACTTGTATATTTTGATACAGTT  
CTTTGTAATAAAATTGACCATTGTAGGTAATCAGGAAAAAAAAAAAAAAAAAAAAA

27/105  
**FIGURE 26**

MRLPRRAALGLLPLLLLLPPAPEAAKKPTPCHRCRGLVDKFNQGMVDTAKKNFGGGNTAWEKTL SKYESSEIRL  
LEILEGLCESSDFECNQMLEAQEEHLEAWWLQLKSEYDLEWFCVKT LKVCCSPGTYGPDC LACQGGSQRPCSG  
NGHCSGDGSRQGDGSCRCHMGYQGPLCTDCMDGYFSSLRNETHS ICTACDESCKTCSGLTNRDCGECEVGWVLDE  
GACVDVDECAAEPFPCSAAQFCKNANGSYTCEDVDECSLAECTCVRKNENCYNTPGSYVCVCPDGFEETEDACVP  
PAEAEATEGESPTQLPSREDL

28/105  
**FIGURE 27**

GTGCAGTTGCGGCTCCAGGGCCATGGCGGAGGAGCAGGGCCGGGAACGGGACTCGGTTCCCAAGCCGTCGGTGCT  
GTTCTCCACCCAGACCTGGGCGTGGGCGGCGCTGAGCGGCTGGTGTGGACGCGGCGCTGGCGCTGCAGGCGCG  
CGGGTGTAGCGTGAAGATCTGGACAGCGCACTACGACCCGGGCCACTGTTTCGCCGAGAGCCGCGAGCTACCGGT  
GCGCTGTGCCGGGGACTGGCTGCCGCGAGGCCTGGGCTGGGGCGGCCGCGGCGCCGCGCTCTGCGCCTACGTGCG  
CATGGTTTTCTGGCGCTCTACGTGCTGTTCTCGCCGACGAGGAGTTCGACGTGGTAGTGTGCGACCAGGTGTC  
TGCCTGTATCCCAGTGTTTCAAGGCTGGCTAGACGGCGGAAGAAGATCCTATTTTACTGTCACTTCCCAGATCTGCT  
TCTCACCAAGAGAGATTCTTTTCTTAAACGACTATACAGGGCCCCAATTGACTGGATAGAGGAATACACCACAGG  
CATGGCAGACTGCACTCTTAGTCAACAGCCAGTTTACAGCTGCTGTTTTTAAGGAAACATTCAAGTCCCTGTCTCA  
CATAGACCCTGATGTCCTCTATCCATCTCTAAATGTCACCAGCTTTGACTCAGTTGTTCTGAAAAGCTGGATGA  
CCTAGTCCCCAAGGGGAAAAAATTCTGCTGCTCTCCATCAACAGATACGAAAGGAAGAAAAATCTGACTTTGGC  
ACTGGAAGCCCTAGTACAGCTGCGTGGAAGATTGACATCCCAAGATTGGGAGAGGGTTCATCTGATCGTGGCAGG  
TGGTTATGACGAGAGAGTCTTGGAGAATGTGGAACATTATCAGGAATTGAAGAAAATGGTCCAACAGTCCGACCT  
TGGCCAGTATGTGACCTTCTTGAGGTCTTTCTCAGACAAACAGAAAATCTCCCTCCTCCACAGCTGCACGTGTGT  
GCTTTACACACCAAGCAATGAGCACTTTGGCATTGTCCCTCTGGAAGCCATGTACATGCAGTGCCAGTCATTGC  
TGTTAATTGGGGTGGACCTTGGAGTCCATTGACCACAGTGTCACAGGGTTTCTGTGTGAGCCTGACCCGGTGCA  
CTTCTCAGAAGCAATAGAAAAGTTCATCCGTGAACCTTCTTAAAGCCACCATGGGCCTGGCTGGAAGAGCCAG  
AGTGAAGGAAAAATTTTCCCTGAAGCATTTACAGAACAGCTCTACCGATATGTTACCAAACCTGCTGGTATTAATC  
AGATTGTTTTTAAGATCTCCATTAATGTCATTTTTATGGATTGTAGACCCAGTTTGAAGCCAAAAAGAAACCT  
AGAATCTAATGCAGAAGAGATCTTTTAAAAAATAAAGTTGAGTCTTGAATGTGAGCCACTTTCCTATATACCACA  
CCTCCCTGTCCACTTTTTCAGAAAAACCATGTCTTTTATGCTATAATCATTCCAAATTTTGCCAGTGTTAAGTTAC  
AAATGTGGTGTGTCATTCCATGTTTACGAGAGTATTTTAAATTATATTTTCTCGGGATTATTGCTCTTCTGTCTATAA  
ATTTTGAATGATACTGTGCCTTAATTGGTTTTTCATAGTTTAAAGTGTGTATCATTATCAAAGTTGATTAATTTGGC  
TTCATAGTATAATGAGAGCAGGGCTATTGTAGTTCCAGATTCAATCCACCGAAGTGTTCAGTGTCTATCTGTTAG  
GGAATTTTTGTTTGTCTGCTTTGCTGGATCCATAGCGAGAGTGCTCTGTATTTTTTTTAAGATAATTTGTAT  
TTTTGCACACTGAGATATAATAAAAGGTGTTTATC

29/105  
**FIGURE 28**

MAEEQGRERDSVPKPSVLF LHPDLGVGGAERLVLD AALALQARGCSVKI WTAHYDPGHCFAESREL PVR CAGDWL  
PRGLGWGGRGA AVCA YVRMVFLALYVLF LADEEFDVV VCDQVSACIPV FRLARRRKKILFYCHFPD LLLTKRDSF  
LKRLYRAPIDWIEEYTTGMADCILVNSQFTAAVFKETFKSLSHIDPDVLYPSLNVTSFDSVVPEKLDDLVPKGKK  
FLLLSINRYERKKNLT LALEALVQLRGRLTSQDW ERVHLIVAGGYDERVLENVEHYQELKKMVQQSDLGQYVTF L  
RSFSDKQKISLLHSCTCVLYTPSNEHFGIVPLEAMYMQCPVIAVNSGGPLESIDHSVTGFLCEPD PVHFSEAIEK  
FIREPSLKATMGLAGRARVKEKFSPEAFTEQLYRYVTKLLV

30/105  
**FIGURE 29**

GTTATTTATTGACTTTTGGCCAAGGCTTGGTCACAACAATCATATTACGTAATTTTCCCCCTTTGGTGGCAGAAC  
TGTAGCAATAGGGGGAGAAGACAAGCAGCGGATGAAGCGTTTTCTCAGCTTTTGGAAATTGCTTCGACCTGACATC  
CGTTGTAACCGTTTGGCACTTCTTCAGATATTTTTATAAAAAAGTACCACTGAGTCAGTGAGGGCCACAGATTGG  
TATTAATGAGATACGAGGGTTGTTGCTGGGTGTTTGTTCCTGAGCTAAGTGATCAAGACTGTAGTGGAGTTGCA  
GCTAACATGGGTTAGGTTTAAACCGTGGGGGATGCAACCCCTTTGCGTTTCATATGTAGGCCTACTGGCTTTGTG  
TAGCTGGAGTAGTTGGGTTGCTTTGTGTTAGGAGGATCCAGATCATGTTGGCTACAGGGAGATGCTCTCTTTGAG  
AGGCTCCTGGGCATTGATTCCATTTCAATCTCATTCTGGATATGTTGTTTCATTGAGTAAAGGAGGAGAGACCCTCA  
TACGCTATTTAAATGTCACTTTTTTGCCTATGCCCCGTTTTTTGGTCATGTTTCAATTAATTGTGAGGAAGGCGC  
AGCTCCTCTCTGCACGTAGATCATTTTTTAAAGCTAATGTAAGCACATCTAAGGGAATAACATGATTTAAGGTTG  
AAATGGCTTTAGAATCATTTGGGTTTGAGGGTGTGTTATTTTGAGTCATGAATGTACAAGCTCTGTGAATCAGAC  
CAGCTTAAATACCCACACCTTTTTTCGTAGGTGGGCTTTTCCTATCAGAGCTTGGCTCATAACCAAATAAAGTT  
TTTTGAAGGCCATGGCTTTTACACAGTTATTTTATTTATGACGTTATCTGAAAGCAGACTGTTAGGAGCAGTA  
TTGAGTGGCTGTCACACTTTGAGGCAACTAAAAGGCTTCAAACGTTTTGATCAGTTTCTTTTCAGGAAACATTG  
TGCTCTAACAGTATGACTATTCTTTCCCCACTCTTAAACAGTGTGATGTGTGTTAT

31/105  
**FIGURE 30**

MCSLSKGGETLIRYLNVTFLPMRFLVMFQLIVRKAQLLSARRSFFKANVSTSKGIT

32/105  
**FIGURE 31**

AAAAGCGAGTGAAGAGAGCGCGACGGCGGCGGCGGCGGCGCGCAGCTATTGCTGGACGGCCAGTGGGAGAGCGA  
GGCCTGAGCCTCTGCGTCTAGGATCAAAATGTTTTCAATCCAGAATACTATGAAGGCAAGAACGTCCTCCTCAC  
AGGAGCTACCGGTTTTCTAGGGAAGGTGCTTCTGGAAAAGTTGCTGAGGTCTTGTCTTAAGGTGAATTCAGTATA  
TGTTTTGGTGAGGCAGAAAGCTGGACAGACACCACAAGAGCGAGTGGAAGAAGTCCTTAGTGGAAGCTTTTTGA  
CAGATTGAGAGATGAAAATCCAGATTTTAGAGAGAAAATTATAGCAATCAACAGCGAACTCACCCAACCTAAACT  
GGCTCTCAGTGAAGAAGATAAAGAGGTGATCATAGATTCTACCAATATTATATCCACTGTGCAGCTACAGTAAG  
GTTTAATGAAAATTTAAGGGATGCTGTTCAAGTTAAATGTGATTGCAACGCGACAGCTTATTCTCCTTGCAACA  
AATGAAGAATCTGGAAGTGTTTCATGCATGTATCAACAGCATATGCCTACTGTAATCGCAAGCATATTGATGAAGT  
AGTCTATCCACCACCTGTGGATCCCAAGAAGCTGATTGATTCTTTAGAGTGGATGGATGATGGCCTAGTAAATGA  
TATCACGCCAAAATTGATAGGAGACAGACCTAATACATACATATACACAAAAGCATTGGCAGAATATGTTGTACA  
ACAAGAAGGAGCAAAACTAAATGTGGCAATTGTAAGGCCATCGATTGTTGGTGCCAGTTGGAAAGAACCTTTTCC  
AGGATGGATTGATAACTTTAATGGACCAAGTGGTCTCTTTATTGCGGCAGGGAAAGGAATTCTTCGAACAATACG  
TGCTTCCAACAATGCCCTTGCAAGTCTTGTTCTGTAGATGTAGTTGTCAACATGAGTCTTGCGGCAGCCTGGTA  
TTCCGGAGTTAATAGACCAAGAAACATCATGGTGTATAATTGTACAACAGGCAGCACTAATCCTTTTCCACTGGGG  
TGAAGTTGGTATGATTTTACCTGTGTTTTTGAATGTTAGAATAAATCTTAAAGAACCAAAAAAAAAAAAAAAAAAAA  
AAAAAA



33/105  
**FIGURE 32**

MVSIPEYYEGKNVLLTGATGFLGKVLLLEKLLRSCPKVNSVYVLVRQKAGQTPQERVEEVLSGKLFDRRLDENPDF  
REKIIAINSELTQPKLALSEEDKEVIIDSTNIIFHCAATVRFNENLRDAVQLNVIATRQLILLAQQMKNLEVFMH  
VSTAYAYCNRKHIDEVVYPPPVDPKKLIDSLEWMDDGLVNDITPKLIGDRPNTYIYTKALAEYVVQQEGAKLNVA  
IVRPSIVGASWKEPFPGWIDNFNGPSGLFIAAGKGILRTIRASNNALADLVPVDVVVNMSLAAAWYSGVNRPRNI  
MVYNCTTGSTNPFHWGEVGMILPVFLNVRINLKEPKKKKKK

34/105  
**FIGURE 33**

GAACGAGGGTCCTAGCTGCCGCCACCCGAACAGCCTGTCCTGGTGCCCCGGCTCCCTGC~~CCC~~CGCCCCAGTCAATG  
ACCCTGCGCCCCTCACTCCTCCCGCTCCATCTGCTGCTGCTGCTGCTGCTCAGTGCGGCGGTGTGCCGGGCTGAG  
GCTGGGCTCGAAACCGAAAGTCCCGTCCGGACCCCTCCAAGTGGAGACCCTGGTGGAGCCCCCAGAACCATGTGCC  
GAGCCCGCTGCTTTTGGAGACACGCTTCACATACACTACACGGGAAGCTTGGTAGATGGACGTATTATTGACACC  
TCCCTGACCAGAGACCCTCTGGTTATAGAAGCTTGGCCAAAAGCAGGTGATTCCAGGTCTGGAGCAGAGTCTTCTC  
GACATGTGTGTGGGAGAGAAGCGAAGGGCAATCATTCCTTCTCACTTGGCCTATGGAAAACGGGGATTTCACCA  
TCTGTCCCAGCGGATGCAGTGGTGCAGTATGACGTGGAGCTGATTGCACTAATCCGAGCCAACTACTGGCTAAAG  
CTGGTGAAGGGCATTCTTGCCTCTGGTAGGGATGGCCATGGTGCCAGCCCTCCTGGGCCTCATTGGGTATCACCTA  
TACAGAAAGGCCAATAGACCCAAAGTCTCCAAAAAGAAGCTCAAGGAAGAGAAACGAAACAAGAGCAAAAAGAAA  
TAATAAATAATAAATTTAAAAAACTTAAAAAAAAAAAAAAAAAAAAAAAAAAAA

35/105  
**FIGURE 34**

MTLRPSLLPLHLLLLLLLLLSAAVCRAEAGLETESPVRTLQVETLVEPPEPCAEPAAFCDTLHIHYTGSLVDGRIID  
TSLTRDPLVIELGQKQVIPGLEQSLDMCVGEKRRAIIPSHLAYGKRGFPSPADAVVQYDVELIALIRANYWL  
KLVKGILPLVGMAMVPALLGLIGYHLYRKANRPKVSKKKLKEEKRNKSKKK

36/105  
**FIGURE 35**

CCTATTCTACGGCTGACCCCTGGTGGTCACGTGGATCTGTTTCGCCACGCAAGTCTGGGTCCTTCGGCGATTGACC  
GGGGTCCTTGCTGTTTCGGGAGCCTCTCCTAAGCTGCCTGTTTCGCGGAGAGTTTGGAGGGGCGGGTTTGGGGTCG  
GTGTCTGATTGGGGCTCGCACCCGACGACGCTGGAGTCCCGCTTAGGTACCAGTTAGCGTCAGGGGAGCTGGGGTC  
AGGCGGTTCGCCGGGACACCCCGTGTGTGGCAGGCGGCGAAGCGCTCTGGAGAATCCCGGACAGCCCTGCTCCCTG  
CAGCCAGGTGTAGTTTCGGGAGCCACTGGGGCCAAAGTGAGAGTCCAGCGGTCTTCCAGCGCTTGGGCCACGGCG  
GCGGCCCTGGGAGCAGAGGTGGAGCGACCCATTACGCTAAAGATGAAGGCTGGGGTTGGCTGGCCCTGCTTCT  
GGGGGCCCTGCTGGGAACCGCCTGGGCTCGGAGGAGCCAGGATCTCCACTGTGGAGCATGCAGGGCTCTGGTGGA  
TGAAGTAGAATGGGAAATTGCCCAGGTGGACCCCAAGAAGACCATTGAGATGGGATCTTTCCGGATCAATCCAGA  
TGGCAGCCAGTCAGTGGTGGAGGTGCCTTATGCCCCGCTCAGAGGCCACCTCACAGAGCTGCTGGAGGAGATATG  
TGACCGGATGAAGGAGTATGGGGAACAGATTGATCCTTCCACCCATCGCAAGAACTACGTACGTGTAGTGGGCCG  
GAATGGAGAATCCAGTGAAGTGGACCTACAAGGCATCCGAATCGACTCAGATATTAGCGGCACCCTCAAGTTTGC  
GTGTGAGAGCATTGTGGAGGAATACGAGGATGAACTCATTGAATTCTTTCCCGAGAGGCTGACAATGTTAAAGA  
CAAACCTTTGCAGTAAGCGAACAGATCTTTGTGACCATGCCCTGCACATATCGCATGATGAGCTATGAACCACTGG  
AGCAGCCACACTGGCTTGATGGATCACCCCCAGGAGGGGAAAATGGTGGCAATGCCTTTTATATATTATGTTTT  
TACTGAAATTAAGTGAAGAAATATGAAACC

37/105  
**FIGURE 36**

MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQSVVEVPYARSE  
AHLTELLEEICDRMKEYGEQIDPSTHRKNYVRVVGVRNGESSELDLQGIRIDSDISGTLKFACESIVEEYEDIELIE  
FFSREADNVKDKLCSKRTDLCDHALHISHDEL

38/105  
**FIGURE 37**

GAGGTTGAAGGACCCAGGCGTGTCAGCCCTGCTCCAGAGACCTTGGGCATGGAGGAGAGTGTTCGTACGGCCCTCA  
GTGTTTGTGGTGGATGGACAGACCGACATCCCATTACAGAGGCTGGGACGAAGCCACCGGAGACAGTCGTGCAGT  
GTGGCCCGGGTGGGTCTGGGTCTCTTGCTGTTGCTGATGGGGGCTGGGCTGGCCGTCCAAGGCTGGTTCCTCCTG  
CAGCTGCACTGGCGTCTAGGAGAGATGGTCACCCGCCTGCCTGACGGACCTGCAGGCTCCTGGGAGCAGCTGATA  
CAAGAGCGAAGGTCTCACGAGGTCAACCCAGCAGCGCATCTCACAGGGGCCAACTCCAGCTTGACCGGCAGCGGG  
GGGCCGCTGTTATGGGAGACTCAGCTGGGCCTGGCCTTCCTGAGGGGCCTCAGCTACCACGATGGGGCCCTTGTG  
GTCACCAAAGCTGGCTACTACTACATCTACTCCAAGGTGCAGCTGGGCGGTGTGGGCTGCCCGCTGGGCCTGGCC  
AGCACCATCACCCACGGCCTCTACAAGCGCACACCCCGCTACCCCGAGGAGCTGGAGCTGTTGGTCAGCCAGCAG  
TCACCTGCGGACGGGCCACCAGCAGCTCCCGGTCTGGTGGGACAGCAGCTTCCTGGGTGGTGTGGTACACCTG  
GAGGCTGGGGAGGAGGTGGTTCGTCCGTGTGCTGGATGAACGCCTGGTTCGACTGCGTGATGGTACCCGGTCTTAC  
TTCGGGGCTTTTCATGGTGTGAAAGGAAGGAGCGTGGTGCATTGGACATGGGTCTGACACGTGGAGAACTCAGAGGG  
TGCCTCAGGGGAAAGAAACTCACGAAGCAGAGGCTGGGCGTGGTGGCTCTCGCCTGTAATCCAGCACTTTGGG  
AGGCCAAGGCAGGCGGATCACCTGAGGTCAGGAGTTCGACACCAGCCTGGCTAACATGGCAAAACCCCATCTCTA  
CTAAAAATACAAAATTAGCCGGACGTGGTGGTGCCTGCCTGTAATCCAGCTACTCAGGAGGCTGAGGCAGGATA  
ATTTTGCTTAAACCCGGGAGGCGGAGGTTGCAGTGAGCCGAGATCACACCACTGCACTCCAACCTGGGAAACGCA  
GTGAGACTGTGCCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

39/105  
**FIGURE 38**

MEESVVRPSVFVVDGQTDIPFTRLGRSHRRQSCSVARVGLGLLLLLMGAGLAVQGWFLLQLHWRLGEMVTRLPDG  
PAGSWEQLIQERRSHEVNPA AHLTGANSSLTGSGGPLLWETQLGLAFLRGLSYHDGALVVTKAGYYYYISKVQLG  
GVGCPLGLASTITHGLYKRTPRYPEELELLVSQQSPCGRATSSSRVWWDSSFLGGVVHLEAGEEVVVRVLDERLV  
RLRDGTRSYFGAFMV

40/105  
**FIGURE 39**

GGCACGAGGGGAGTGGAAGTTCTCCGGCAGCCCTGAGATCTCAAGAGTGACATTTGTGAGACCAGCTAATTTGA  
TTAAAATTCTCTTGGAATCAGCTTTGCTAGTATCATACCTGTGCCAGATTTCAATCATGGGAAACAGCTGTTACAA  
CATAGTAGCCACTCTGTTGCTGGTCCTCAACTTTGAGAGGACAAGATCATTGCAGGATCCTTGTAGTAAGTCCCC  
AGCTGGTACATTCTGTGATAATAACAGGAATCAGATTTGCAGTCCCTGTCTCCAAATAGTTTCTCCAGCGCAGG  
TGGACAAAGGACCTGTGACATATGCAGGCAGTGTAAGGTGTTTTAGGACCAGGAAGGAGTGTTCTCCACCAG  
CAATGCAGAGTGTGACTGCACTCCAGGGTTTCACTGCCTGGGGGCAGGATGCAGCATGTGTGAACAGGATTGTAA  
ACAAGGTCAAGAAGTACAAAAAAGGTTGTAAAGACTGTTGCTTTGGGACATTTAACGATCAGAAACGTGGCAT  
CTGTGACCCCTGGACAACTGTTCTTTGGATGGAAAGTCTGTGCTTGTGAATGGGACGAAGGAGAGGGACGTGGT  
CTGTGGACCATCTCCAGCCGACCTCTCTCCGGGAGCATCTCTGTGACCCCGCCTGCCCTGCGAGAGAGCCAGG  
ACACTCTCCGCAGATCATCTCCTTCTTTCTTGCCTGACGTCGACTGCGTTGCTCTTCTGCTGTTCTTCTCAC  
GCTCCGTTTCTCTGTTGTTAAACGGGGCAGAAAGAACTCCTGTATATATTCAAACAACCATTTATGAGACCAGT  
ACAACTACTCAAGAGGAAGATGGCTGTAGCTGCCGATTTCCAGAAGAAGAAGAGGAGGATGTGAAGTGTGAAA  
TGGAAGTCAATAGGGCTGTTGGGACTTTCTTGAAAAGAAGCAAGGAAATATGAGTCATCCGCTATCACAGCTTTC  
AAAAGCAAGAACACCATCTACATAATACCCAGGATTCCCCAACACACGTTCTTTTCTAAATGCCAATGAGTTG  
GCCTTTAAAAATGCACCACTTTTTTTTTTTTTTTGTACAGGGTCTCACTCTGTACCCAGGCTGGAGTGCAGTGGC  
ACCACCATGGCTCTCTGCAGCCTTGACCTCTGGGAGCTCAAGTGATCCTCCTGCCTCAGTCTCCTGAGTAGCTGG  
AACTACAAGGAAGGGCCACCACACCTGACTAACTTTTTTGTGTTTTTGTGTTGGTAAAGATGGCATTTCACCATGTT  
GTACAGGCTGGTCTCAAACCTCCTAGGTTCACTTTGGCCTCCCAAAGTGCTGGGATTACAGACATGAAGTCCAGG  
CCCGGCCAAAATAATGCACCACTTTAAACAGAACAGACAGATGAGGACAGAGCTGGTGATAAAAAAAAAAAAAA  
AAAGCATTTTCTAGATACCACTTAACAGGTTTGAGCTAGTTTTTTTGAAATCCAAAGAAAATTATAGTTTAAATT  
CAATTACATAGTCCAGTGGTCCAACATAATTATAATCAAATCAATGCAGGTTGTTTTTGGTGCTAATATGA  
CATATGACAATAAGCCACGAGGTGCAGTAAGTACCCGACTAAAGTTTCCGTGGGTCTGTGTCATGTAACACGACAT  
GCTCCACCGTCAGGGGGGAGTATGAGCAGAGTGCTGAGTTTAGGGTCAAGGACAAAAACCTCAGGCCTGGAGG  
AAGTTTTGGAAGAGTTCAAGTGTCTGTATATCCTATGGTCTTCTCCATCCTCACACCTTCTGCCTTTGTCTGC  
TCCCTTTTAAGCCAGGTTACATTCTAAAAATTCTTAACCTTTTAACATAATATTTTATACCAAAGCCAATAAATGA  
ACTGCATATGAAA



41/105  
**FIGURE 40**

MGNSCYNIVATLLLVLNFERTRSLQDPCSNCPAGTFCDNNRNQICSPCPPNSFSSAGGQRTCDICRQCKGVFTR  
KECSSTSNAECDCTPGFHCLGAGCSMCEQDCKQGQELTKKGCKDCCFGTFNDQKRGICRPWTNCSLDGKSVLVNG  
TKERDVVCGPSPADLSPGASSVTPPAPAREPGHSPQIISFFLALTSTALLFLLFFLTTLRFSVVKRGRKKLLYIFK  
QPFMRPVQTTQEEDGCSCRFPEEEEGGCEL

42/105  
**FIGURE 41**

GGAACAAAAGCTGGAGCTCCACCGCGGTGGCGGCCGCTCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGG  
CACGAGCAGAAGAGGGGGCTAGCTAGCTGTCTCTGCGGACCAGGGGAGACCCCGCGCCCCCGGTGTGAGGCGG  
CCTCACAGGGCCGGGTGGGCTGGCGAGCCGACGCGGCGGCGGAGGAGGCTGTGAGGAGTGTGTGGAACAGGACCC  
GGGACAGAGGAACCATGGCTCCGCAGAACCTGAGCACCTTTTGCTGTTGCTGCTATACCTCATCGGGGCGGTGA  
TTGCCGGACGAGATTTCTATAAGATCTTGGGGGTGCCTCGAAGTGCCTCTATAAAGGATATTAAAAAGGCCTATA  
GGAACTAGCCCTGCAGCTTCATCCCGACCGGAACCTGATGATCCACAAGCCCAGGAGAAATTCAGGATCTGG  
GTGCTGCTTATGAGGTTCTGTCTAGATAGTGAGAAACGGAAACAGTACGATACTTATGGTGAAGAAGGATTAAAG  
ATGGTCATCAGAGCTCCCATGGAGACATTTTTTCACACTTCTTTGGGGATTTTGGTTTCATGTTTGGAGGAACCC  
CTCGTCAGCAAGACAGAAATATTCCAAGAGGAAGTGATATTATTGTAGATCTAGAAGTCACTTTGGAAGAAGTAT  
ATGCAGGAAATTTTGTGGAAGTAGTTAGAAACAAACCTGTGGCAAGGCAGGCTCCTGGCAAACGGAAGTGCAATT  
GTCGGCAAGAGATGCGGACCACCCAGCTGGGGCCCTGGGCGCTTCCAAATGACCCAGGAGGTGGTCTGCGACGAAT  
GCCCTAATGTCAAACCTAGTGAATGAAGAACGAACGCTGGAAGTAGAAATAGAGCCTGGGGTGAGAGACGGCATGG  
AGTACCCCTTTATTGGAGAAGGTGAGCCTCACGTGGATGGGGAGCCTGGAGATTIACGGTTCCGAATCAAAGTTG  
TCAAGCACCAATATTTGAAAGGAGAGGAGATGATTTGTACACAAATGTGACAAATCTCATTAGTTGAGTCACTGG  
TTGGCTTTGAGATGGATATTACTCACTTGGATGGTCACAAGGTACATATTTCCCGGGATAAGATCACCAGGCCAG  
GAGCGAAGCTATGGAAGAAAGGGGAAGGGCTCCCCAACTTTGACAACAACAATATCAAGGGCTCTTTGATAATCA  
CTTTTGATGTGGATTTTCCAAAAGAACAGTTAACAGAGGAAGCGAGAGAAGGTATCAAACAGCTACTGAAACAAG  
GGTCAGTGCAGAAGGTATACAATGGACTGCAAGGATATTGAGAGTGAATAAAATTGGACTTTGTTTAAATAAGT  
GAATAAGCGATATTTATTATCTGCAAGGTTTTTTTGTGTGTGTTTTTGTATTTTCAATATGCAAGTTAGGC  
TTAATTTTTTTTATCTAATGATCATCATGAAATGAATAAGAGGGCTTAAGAATTTGTCCATTTGCATTTCGAAAAG  
AATGACCAGCAAAGGTTTACTAATACGTCTCCCTTTGGGGATTTAATGTCTGGTGCTGCCGCCTGAGTTTCAAG  
AATTAAAGCTGCAAGAGGACTCCAGGAGCAAAGAAACACAATATAGAGGGTTGGAGTTGTTAGCAATTTTCATTC  
AAAATGCCAACTGGAGAAGTCTGTTTTTAAATACATTTTGTGTTATTTTT

43/105  
**FIGURE 42**

MAPQNLSTFCLLLLYLIGAVIAGRDFYKILGVPRSASIKDIKKAYRKALQLHPDRNPDDPQAQEKFQDLGAAYE  
VLSDSEKRKQYDITYGEEGLKDGHQSSHGDIFSHFFGDFGFMFGGTPRQQDRNIPRGSDIIVDLEVTLEEVYAGNF  
VEVVRNKPVARQAPGKRKCNCRQEMRTTQLGPGRFQMTQEVVCECPNVKLVNEERTLEVEIEPGVRDGMEYFPI  
GEGEPHVDGEPGDLRFRIKVVKHPIFERRGDDLYTNVTISLVESLVGFEMDITHLDGHKVHISRDKITRPGAKLW  
KKGEGLPNFDNNNIKGSLIITFDVDFPKEQLTEEAREGIKQLLKQGSVQKVYNGLQGY

44/105  
**FIGURE 43**

GACAGTGGAGGGCAGTGGAGAGGACCGCGCTGTCC TGCTGTCACCAAGAGCTGGAGACACCATCTCCCACCGAGA  
GTCATGGCCCCATTGGCCCTGCACCTCCTCGTCCTCGTCCCATCCTCCTCAGCCTGGTGGCCTCCCAGGACTGG  
AAGGCTGAACGCAGCCAAGACCCCTTCGAGAAATGCATGCAGGATCCTGACTATGAGCAGCTGCTCAAGGTGGTG  
ACCTGGGGGCTCAATCGGACCCTGAAGCCCCAGAGGGTGATTGTGGTTGGCGCTGGTGTGGCCGGGCTGGTGGCC  
GCCAAGGTGCTCAGCGATGCTGGACACAAGGTCACCATCCTGGAGGCAGATAACAGGATCGGGGGCCGCATCTTC  
ACCTACCGGGACCAGAACACGGGCTGGATTGGGGA GCTGGGAGCCATGCGCATGCCCAGCTCTCACAGGATCCTC  
CACAAGCTCTGCCAGGGCCTGGGGCTCAACCTGACCAAGTTCACCCAGTACGACAAGAACACGTGGACGGAGGTG  
CACGAAGTGAAGCTGCGCAACTATGTGGTGGAGAAAGGTGCCCGAGAAGCTGGGCTACGCCTTGCGTCCCCAGGAA  
AAGGGCCACTCGCCCCAAGACATCTACCAGATGGCTCTCAACCAGGCCCTCAAAGACCTCAAGGCACTGGGCTGC  
AGAAAGGCGATGAAGAAGTTTGAAAGGCACACGCTCTTGGAATATCTTCTCGGGGAGGGGAACCTGAGCCGGCCG  
GCCGTGCAGCTTCTGGGAGACGTGATGTCCGAGGATGGCTTCTTCTATCTCAGCTTCGCCGAGGGCCCTCCGGGCC  
CACAGCTGCCCTCAGCGACAGACTCCAGTACAGCCGCATCGTGGGTGGCTGGGACCTGCTGCCGCGCGCGCTGCTG  
AGCTCGCTGTCCGGGCTTGTGCTGTTGAACGCGCCCGTGGTGGCGATGACCCAGGGACCGCACGATGTGCACGTG  
CAGATCGAGACCTCTCCCCCGGCGCGGAATCTGAAGGTGCTGAAGGCCGACGTGGTGTGCTGACGGCGAGCGGA  
CCGGCGGTGAAGCGCATCACCTTCTCGCCGCCGCTGCCCGCCACATGCAGGAGGCGCTGCGGAGGCTGCACTAC  
GTGCCGGCCACCAAGGTGTTCTTAAGCTTCCGCAGGCCCTTCTGGCGCGAGGAGCACATTGAAGGCGGCCACTCA  
AACACCGATCGCCCGTCGCGCATGATTTTCTACCCGCCGCCGCGCGAGGGCGCGCTGCTGCTGGCCTCGTACACG  
TGGTCGGACGCGGCGGCAGCGTTTCGCCGGCTTGAGCCGGGAAGAGGCGTTGCGCTTGGCGCTCGACGACGTGGCG  
GCATTGCACGGGCCTGTCTGTGCGCCAGCTCTGGGACGGCACCGGCGTCTCAAGCGTTGGGCGGAGGACCAGCAC  
AGCCAGGGTGGCTTTGTGGTACAGCCGCCGGCGCTCTGGCAAACCGAAAAGGATGACTGGACGGTCCCTTATGGC  
CGCATCTACTTTGCCGGCGAGCACACCGCCTACCCGCACGGCTGGGTGGAGACGGCGGTCAAGTCGGCGCTGCGC  
GCCGCCATCAAGATCAACAGCCGGAAGGGGCCTGCATCGGACACGGCCAGCCCCGAGGGGCACGCATCTGACATG  
GAGGGGCAGGGGCATGTGCATGGGGTGGCCAGCAGCCCCTCGCATGACCTGGCAAAGGAAGAAGGCAGCCACCCT  
CCAGTCCAAGGCCAGTTATCTCTCCAAAACACGACCCACACGAGGACCTCGCATTAAAGTATTTTCGGAAAAA

45/105  
**FIGURE 44**

MAPLALHLLVLPILLSLVASQDWKAERSQDPFEKCMQDPDYEQLLKVVWGLNRTLKPQRVIVVGAGVAGLVAA  
KVLSDAGHKVTILEADNRIGGRIFTYRDQNTGWIGELGAMRMPSSHRILHKLCQGLGLNLTKFTQYDKNTWTEVH  
EVKLRNYVVEKVPEKLGALRPQEKGHSPEDIYQMALNQALKDLKALGCRKAMKKFERHTLLEYLLGEGNLSRPA  
VQLLDVMSSEDGFFYLSFAEALRAHSCLSDRLOYSRIVGGWDLPRALLSSLSGLVLLNAPVVAMTQGP HDVHVQ  
IETSPPARNLKVLKADVLLTASGPAVKRITFSPP LPRHMQEALRRLHYVPATKVFLSFRPPFWREEHIEGGHSN  
TDRPSRMIFYPPPPREGALLLASYTWSDAFAAGLSREEALRLALDDVAALHGPVVRQLWDGTGVVVRWAEDQHS  
QGGFVVQPPALWQTEKDDWTVPYGRIFYAGEHTAYPHGWVETAVKSALRAAIKINSRKGPASDTASPEGHASDME  
GQGHVHGVASSPSHDLAKEEGSHPPVQQLSLQNTTHTRTSH

46/105  
**FIGURE 45**

TGCACAAGCAGAATCTTCAGAACAGGTTCTCCTTCCCCAGTCACCAGTTGCTCGAGTTAGAATTGTCTGCAATGG  
CCGCCCTGCAGAAATCTGTGAGCTCTTTCCTTATGGGGACCCCTGGCCACCAGCTGCCTCCTTCTCTTGGCCCTCT  
TGGTACAGGGAGGAGCAGCTGCGCCCATCAGCTCCCACTGCAGGCTTGACAAGTCCAACTTCCAGCAGCCCTATA  
TCACCAACCGCACCTTCATGCTGGCTAAGGAGGCTAGCTTGGCTGATAACAACACAGACGTTCGTCTCATTGGGG  
AGAAACTGTTCCACGGAGTCAGTATGAGTGAGCGCTGCTATCTGATGAAGCAGGTGCTGAACTTCACCCTTGAAG  
AAGTGCTGTTCCCTCAATCTGATAGGTTCCAGCCTTATATGCAGGAGGTGGTGCCCTTCCCTGGCCAGGCTCAGCA  
ACAGGCTAAGCACATGTCATATTGAAGGTGATGACCTGCATATCCAGAGGAATGTGCAAAAGCTGAAGGACACAG  
TGAAAAAGCTTGGAGAGAGTGGAGAGATCAAAGCAATTGGAGAACTGGATTTGCTGTTTATGTCTCTGAGAAATG  
CCTGCATTGACCAGAGCAAAGCTGAAAAATGAATAACTAACCCCTTTCCCTGCTAGAAATAACAATTAGATGC  
CCCAAAGCGATTTT

47/105  
**FIGURE 46**

MAALQKSVSSFLMGTLATSCLLLLALLVQGGAAAPISSHCRLDKSNFQQPYITNRTFMLAKEASLADNNTDVRLI  
GEKLFHGVSMSERCYLMKQVLNFTLEEVLPQSDRFQPYMQEVVPFLARLSNRLSTCHIEGDDLHIQRNVQKLKD  
TVKKLGESGEIKAIGELDLLFMSLRNACI

48/105

**FIGURE 47**

GAGGGGTAGAGATGCAGAAAGGCAGAAAGGAGAAAATTCAGGATAACTCTCCTGAGGGGTGAGCCAAGCCCTGCC  
ATGTAGTGCACGCAGGACATCAACAAACACAGATAACAGGAAATGATCCATTCCCTGTGGTCACTTATTCTAAAG  
GCCCCAACCTTCAAAGTTCAAGTAGTGATATGGATGACTCCACAGAAAGGGAGCAGTCACGCCTTACTTCTTGCC  
TTAAGAAAAGAGAAGAAATGAAACTGAAGGAGTGTGTTTCCATCCTCCCACGGAAGGAAAGCCCCTCTGTCCGAT  
CCTCCAAAGACGGAAAGCTGCTGGCTGCAACCTTGCTGCTGGCACTGCTGTCTTGCTGCCTCACGGTGGTGTCTT  
TCTACCAGGTGGCCGCCCTGCAAGGGGACCTGGCCAGCCTCCGGGCAGAGCTGCAGGGCCACCACGCGGAGAAGC  
TGCCAGCAGGAGCAGGAGCCCCAAGGCCGGCCTGGAGGAAGCTCCAGCTGTCACCGCGGGACTGAAAATCTTTG  
AACCACCAGCTCCAGGAGAAGGCAACTCCAGTCAGAACAGCAGAAATAAGCGTGCCGTTTCAAGGTCCAGAAGAAA  
CAGTCACTCAAGACTGCTTGCAACTGATTGCAGACAGTGAAACACCAACTATACAAAAGGATCTTACACATTTG  
TTCCATGGCTTCTCAGCTTTAAAAGGGGAAGTGCCCTAGAAGAAAAAGAGAATAAAATATTGGTCAAAGAACTG  
GTTACTTTTTTATATATGGTCAGGTTTTATATACTGATAAGACCTACGCCATGGGACATCTAATTCAGAGGAAGA  
AGGTCCATGTCTTTGGGGATGAATTGAGTCTGGTGACTTTGTTTCGATGTATTCAAATATGCCTGAAACACTAC  
CCAATAATTCTGCTATTCAGCTGGCATTGCAAACTGGAAGAAGGAGATGAACTCCAACCTTGCAATACCAAGAG  
AAAATGCACAAATATCACTGGATGGAGATGTCACATTTTTTGGTGCAATTGAACTGCTGTGACCTACTTACACCA  
TGTCTGTAGCTATTTTCCCTCCCTTTCTCTGTACCTCTAAGAAGAAAGAATCTAACAGAAAAAAAAAAAAAAAAAA  
AAAAAAAAAA

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49/105  
**FIGURE 48**

MDDSTEREQSRLTSCCLKKREEMKLKECVSILPRKESPSVRSSKDGKLLAATLLLALLSCCLTVVSFYQVAALQGD  
LASLRAELQGHHAEKLPAGAGAPKAGLEEAPAVTAGLKIFEPPAPGEGNSSQNSRNKRAVQGPEETVTQDCLQLI  
ADSETPTIQKGSYTFVPWLLSFKRGSAL EEKENKILVKETGYFFIYGQVLYTDKTYAMGH LIQRKKVHVFGDELS  
LVT LFRCIQNMPETLPNNSCYSAGIAKLEEGDELQLAIPRENAQISLDGDVTFFGALKLL

50/105  
**FIGURE 49**

AGTGCGTGAGTTTGGTGGCGGCCGGCTGTGCAGAGACGCCATGTACCGGCTCCTGTCAGCAGTGACTGCCCCGGGC  
TGCCGCCCCCGGGGGCTTGGCCTCAAGCTGCGGACGACGCGGGGTCCATCAGCGCGCCGGGCTGCCGCTCTCGG  
CCACGGCTGGGTGCGGGGCTCGGGCTGGGGCTGGGGCTGGCGCTCGGGGTGAAGCTGGCAGGTGGGCTGAGTGG  
CGCGGCCCCGGCGCAGTCCCCCGCGGCCCGACCCTGAGGCGTCGCCTCTGGCCGAGCCGCCACAGGAGCAGTC  
CCTCGCCCCGTGGTCTCCGCAGACCCCGCGCCGCCCTGCTCCAGGTGCTTCGCCAGAGCCATCGAGAGCAGCCG  
CGACCTGCTGCACAGGATCAAGGATGAGGTGGGCGCACCGGGCATAGTGGTTGGAGTTTCTGTAGATGGAAAAGA  
AGTCTGGTCAGAAGGTTTAGGTTATGCTGATGTTGAGAACCGTGTACCATGTAAACCAGAGACAGTTATGCGAAT  
TGCTAGCATCAGCAAAAGTCTCACCATGGTTGCTCTTGCCAAATTGTGGGAAGCGGGGAAACTGGATCTTGATAT  
TCCAGTACAACATTATGTTCCCGAATTCCCAGAAAAAGAATATGAAGGTGAAAAGGTTTTCTGTCAACAAGATT  
ACTGATTTCCCATTTAAGTGGAAATTCGTCATTATGAAAAGGACATAAAAAAGGTGAAAGAAGAGAAAGCTTATAA  
AGCCTTGAAGATGATGAAAAGAGAATGTTGCATTTAGCAAGAAAAAGAAGGCAAAAGTAATGAAAAGAATGATTT  
TACTAAATTTAAAACAGAGCAGGAGAATGAAGCCAAATGCCGGAATTCAAAACCTGGCAAGAAAAAGAATGATTT  
TGAACAAGGCGAATTATATTTGAGAGAAAAGTTTGAAAATTCATTGAATCCCTAAGATTATTTAAAAATGATCC  
TTTGTTCCTTCAAACCTGGTAGTCAGTTTTTGTATTCAACTTTTGGCTATACCCTACTGGCAGCCATAGTAGAGAG  
AGCTTCAGGATGTAAATATTTGGACTATATGCAGAAAATATTCCATGACTTGGATATGCTGACGACTGTGCAGGA  
AGAAAACGAGCCAGTGATTACAAATAGAGCAAGGTAAATGAAATACCTTCTGCTGTGTCTAGCTATATCGCATCTT  
AACACTATTTTATTAATTTAAAGTCAAATTTTCTTTGTTTCCATTCCAAAATCAACCTGCCACATTTTGGGAGCT  
TTTCTACATGTCTGTTTTCTCATCTGTAAAGTGAAAGGAAGTAAACATGTTTATAAAGTACACTAAGACCTTTG  
ATGAAAGATAGCAATAATATTAATAATTCAAACATGAATACTAAACCAAAATTGCACCCACCATGAGCATCTGT  
AATTTGCTCTTTAACCATTCTTTTTTAGGTTTTAACTAATACTTTGTTTACGTGTTATTAGTTTTTAATTGTTT  
TCATACTGTTTTGAAATAATTTTATACTTATAGAAAAGTTGCAAGAGTAGTACAAAGGATTCACATATCCTCTTT  
ACTCAGATTCCCTTAATGTTAGTTTACCGCATTTGCATTACCTTTCTGTCTACATATGTGTTTGTCTGAACCA  
TTTGGAATAAGTTGTAGACGTGATACCCCTTTACCTATAAATATTTACATGTGTATTTTCTAAAAACAAGGACA  
TTCAGGGCCGGGTGCAGTGGCTCACGCCTGTAATCCAACACTTTGGAAGGCCGAGGTGGGTGGATCACCTGAGG  
TCAGGAGTTCAAGACCAGCCTGGCCAATGTGGTGAAATCAACCTCTCTCTACTAAAAATGCAAAAATTAGCCAG  
GTGTGGTGGCGGGTGCCATAATCCCAGCCACGCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGG  
AGTTGCAGTAAGCCAAGATCGTGCCCTGCACTTCAGGCTGGGCGAAAGAGTGAGACTCCATGTCAAAAAAGGAT

51/105  
**FIGURE 50**

MYRLLSAVTARAAAPGGLASSCGRRGVHQRAGLPPLGHGWVGGGLGLGLGLALGVKLAGGLSGAAPAQSPAAPDPE  
ASPLAEPPQEQSLAPWSPQTPAPPSCRCFARAIESRDLLHRIKDEVGAPGIVVGVSVDGKEVWSEGLGYADVEN  
RVPCKPETVMRIASISKSLTMVALAKLWEAGKLDLDIPVQHYVPEFPEKEYEGEKVSVTTRLLISHLSGIRHYEK  
DIKKVKEEKAYKALKMMKENVAFEQEKEGKSNEKNDFTKFKTEQENEAKCRNSKPGKKKNDFEQGELYLREKFEN  
SIESLRLFKNDPLFFKPGSQFLYSTFGYTLLAAIVERASGCKYLDYMQKIFHDLDMLETTVQEENEPIYNRAR

52/105  
**FIGURE 51**

GGAGCCCATGATTTCTGGAAGAGCCCTAGAGCTTGGCTTTTTCTCTCCTGCAGCACTTAACCGAAACCAGTTTT  
GCAATCAATTCCTGTTCAAAGGCSACCCTACTCTTCTATCCGTCTTTCTCCAGCCCAGACACTCACAGCCCCCT  
GCCAGACCAGGGGACCTCGGAGAGGCAAGGACAGAGGTTTCAGGATCTTCTCTCCCTCGGGACCCAAGGSCACAA  
AGGAGAGCTCCGTGGAGAGAAGAAAATCATTGACTCCTGGGGACACAGATTTGCTGCCACAGAGGCTGATGGAC  
AACCAGGCGGAGAGAGAAAGTGAGGCTGGTGTGGTTTGCAAAGGGATGAGGATGACGCTCCTCTGTGTGAAGAC  
GTGGAGCTACAAGACGGAGATCTGTCCCCGAAGAAAAATATTTTTGAGAGAATTTCCCAGATTGAAAGAAGAT  
CTGAAAGGGAACATTGACAAGCTCCGTGCCCTCGCAGACGATATTGACAAAACCCACAAGAAATTCACCAAGGCT  
AACATGGTGGCCACCTCTACTGCTGTCTCTGAGTGATGAGCCTCCTGGGTTTAGCCCTTGCCCCAGCAACA  
GGAGGAGGAAGCCTGCTGCTCTCCACCGCTGGTCAAGGTTTGGAACAGCAGCTGGGGTCACCAGCATCGTGAGT  
GGTACGTTGGAACGCTCCAAAAATAAGAAAGCCCAAGCACGGGCGGAAGACATACTGCCACCTACGACCAAGAG  
GACAGGGAGGATGAGGAAGAGAAGGCAGACTATGTACAGCTGCTGGAAAGATTATCTATAATCTTAGAAACACC  
TTGAAGTATGCCAAGAAAAACGTCCGTGCATTTTGGAAGCTCAGAGCCAACCCACGCTTGGCCAATGCTACCAAG  
CGTCTTCTGACCACTGGCCAAAGTCTCCTCCCGAGCCGCGTGAGGTCAGGTCAGGTCCTTTGCGGGAACAACACTG  
GCGATGACCAAAAATGCTCGCGTGCTGGGAGGTGTGATGTCCGCCTTCTCCCTTGGCTATGACTTGGCCACTCTC  
TCAAAGGAATGGAAGCACCTGAAGGAAGGAGCAAGGACAAAGTTTGCGGAAGAGTTGAGAGCCAAGGCCTTGGAG  
CTGGAGAGGAACTCACAGAACTCACCCAGCTCTACAAGAGCTTGCAGCAGAAAGTGAGGTCAAGGGCCAGAGGG  
GTGGGGAAGGATTTAACTGGGACCTGCGAAACCGAGGCTTACTGGAAGGAGTTAAGGGAGCATGTGTGGATGTGG  
CTGTGGCTGTGTGTGTGTCTGT  
ATGGCCTTGGAGGTCCAAATAATATCAAGTACATCTTGGAGATGAGGGTGCCGTCTCTGGACAGACCTCGGCATG  
CCTTCTGTTTTCTCCTTCAATGCTCCTTAAGGCCTATGTGCTGGGAAAAGGGTCTTCCCTGTTTGTGTGTGTGT  
GTTTGT  
AAAAGAAGAAGAATACAGTCATGTATCTTGTGTGACAGGGACGCATTCTGATAAATGTGTCTATTAGGCAATTGC  
ATTGTAGTGTGATTATCACAGATTGTACTTATACAAAACCTTAGATGGCATAGCCTACTGCATACCTAGGCTATAT  
GGGAGAGCCTATTGCTCCCAGGCTACGCACCTGTACAGCATGTGACTACTGAATACTATAGGCAATTGCAGCACA  
ATGGGAAATATTTGTGTATCTAAACATATGTAAACAGAGAAAAAGGAAAGTAAAAATATGGCATAAAAGATAAGA  
ATTGGCTCTCCTGTACAGGGCACTTACTACGAATGGAGCTTGCAGGGCTGAGAGTTGCTCCAGATGAGTCAGTGA  
GTGGTGAATGAATGTGAAGGCCTAGGGCATTACTGTATACTACTGTAGGCTTTATAAACACAGCACACTTAGGGT  
ACACAAAATGCATATTAAACATTTTCTTCTTTCAGTATATTAGGCAATAGGAATTTTCAAGTCCACTATAAAT  
CTTATCAAACCATGGTTGTATATGCAGTTGACCGAAACATTGTTATTGGACACATAACTATAGTTGAAAGAATAA  
GCAAAAAGTCTATCTAGGTGTGCTGTCTTGAGCAACTTTTAATTATTCTCCTGTCTGCAATATGAGTTAATCTT  
CTCTGATCGATGTAGATTCCAGGAAGGGGTGTCCAGGACAATTACCTTCTTCTGGAGAAACTTCCCTTAATCAA  
ATAAGAGAACTTCAAAGAAAATCCCTCCCTGTGCTTTGGAAGGGAAGGGAGGTGGGCAGCAGTGGGTCAGAGATA  
GACCTTTGTCTCTTATTTCTGAGGCCCTTCAGTCCTCTTATTCAAAGCACTCAGCATGCCAAAGCACCCCTATT  
TTAGGGTATCTTTTTCTGAGCCCTAAACACTGTGTGGGGATGTCAACTGTGACAGGAAAATATCTTGGGGCCCC  
AGAATCACTAAGGAAAACCTCAAGCTTAGGGAACTTCTTAGGGCAAACCCACCTCCCCTCTATTCAAAGTTATC  
TCTCTGCTCACTGAGATAGATACATATCTGATTGCCTCCTTTGGAAAGGCTAATCAGAACTCAAAGAATGCAA  
CTGTTTGTGTCTCACCTATCTGTGACCTGGAAGCTCCCTCCCCACTGAACCAATGTTCTTCTTACATATATTGAT  
TAATGTCTTATGTCTCCCTAAAAATGTATAAAACCAAGGTATGCCCCAACCATCTTGGCCACATGTCTATCAGGACT  
TCCTGAGTCTGTGTACAGTGTGTCTCAACCTTGGCAAAAATAAATTTCTAAATTAAGTACAGACAAAAA  
AAAAA

53/105  
**FIGURE 52**

MDNQAERESEAGVGLQRDEDDAPLCEDELQDGDLSPEEKIFLREFPRLKEDLKGNIDKLRLALADDIDKTHKKFT  
KANMVATSTAVISGVMSLLGLALAPATGGGSLLLS TAGQGLATAAGVTSIVSGTLERSKNKEAQARAEDILPTYD  
QEDREDEEEKADYVTAAGKIIYNLRNTLKYAKKNVRAFWKLRANPRLANATKRLTTGQVSSRSRVQVQKAFAGT  
TLAMTKNARVLGGVMSAFSLGYDLATLSKEWKHLKEGARTKFAEELRAKALELERKLTQLYKSLQQKVRRA  
RGVGKDLTGTCETEAYWKELREHVMMWLWLCVCLCVCVYVQFT

**FIGURE 53**

[illegible]

55/105  
**FIGURE 54**

MELSQMSELMGLSVLLGLLALMATAAVARGWLRAGEERSGRPACQKANGFPPDKSSGSKKQKQYQIRKEKPQQH  
NFTHRLLAAALKSHSGNISCMDFSSNGKYLATCADDRTIRIWSTKDFLQREHRSMRANVELDHATLVRFSPDCRA  
FIVWLANGDTLRVFKMTKREDGGYTFTATPEDFPKKHKAPVIDIGIANTGKFIMTASSDITVLIWSLKGQVLSTI  
NTNQMNNTAAVSPCGRFVASCFTPDVKVWEVCFGKKGEFQEVVRAFELKGHSAAVHSFAFSNDSRRMASVSKD  
GTWKLWTDVEYKKKQDPYLLKTGRFEEAAGAAPCRLALSPNAQVLALASGSSIHLYNTRRGEKEECFERVHGEC  
IANLSFDITGRFLASCGDRAVRLFHNTPGHRAMVEEMQGHKCRASNESTRQRLQQQLTQAQETLKSLGALKK

56/105  
**FIGURE 55**

GGCACGAGGGGTAAGCGCTCTAGGGCGCTGCGCGGCGCAGCGAAAAATGGCGGCTTCCAGGTGGGCGCGCAAGGC  
CGTGGTCCTGCTTTGTGCTCTGACCTGCTGCTGCTGCTGCTACTGCTACCACCGCCTGGGTCTGCGCGGCCGA  
AGGCTCGCCCGGGACGCGGACGAGTCTACCCACCTCCCCGGAAGAAGAAGGATATTGCGGATTACAATGA  
TGCAGACATGGCGCGTCTTCTGAGCAATGGGAGAAAGATGATGACATTGAAGAAGGAGATCTTCCAGAGCACAA  
GAGACCTTCAGCACCTGTCGACTTCTCAAAGATAGACCCAAGCAAGCCTGAAAGCATATTGAAAATGACGAAAAA  
AGGGAAGACTCTCATGATGTTTGTCACTGTATCAGGAAGCCCTACTGAGAAGGAGACAGAGGAAATTACGAGCCT  
CTGGCAGGGCAGCCTTTTCAATGCCAACTATGACGTCCAGAGGTTTATTGTGGGATCAGACCGTGCTATCTTCAT  
GCTTCGCGATGGGAGCTACGCCTGGGAGATCAAGGACTTTTGGTGGTCAAGACAGGTGTGCTGATGTAACCTCT  
GGAGGGCCAGGTGTACCCCGGCAAGGAGGAGGAAGCAAAGAGAAAAATAAAACAAAGCAAGACAAGGGCAAAAA  
AAAGAAGGAAGGAGATCTGAAATCTCGGTCTTCCAAGGAAGAAAATCGAGCTGGGAATAAAAGAGAAGACCTGTG  
ATGGGGCAGCAGTGACGCGCTGTGGGGGACAGGTGGACGTGGAGAGCTCTTTGCCAGCTCCTGGGGTGGGAGT  
GGTCTCAGGCAACTGCACACCGGATGACATTCTAGTGTCTTCTAGAAAGGGTCTGCCACATGACCAGTTTGTGGT  
CAAAGAATTACTGCTTAATAGGCTTCAAGTAAGAAGACAGATGTTTTCTAATTAATACTGGACACTGACAAATTC  
ATGTTTACTATAAAATCTCCTTACATGGAAATGTGACTGTGTTGCTTTTTTCCCATTTACACTTGACCCCTGAGCC  
CCTTCCAGTGCTGCCTGAGGTGCCCTCTACCTGTGCCTGCCTCTCGTCTGCCAGTTTGATTTGGACCTGTTTTTC  
CCACCTCAGCCCCCATGCTCTTGTCAAACGTGTTTGGCCTCCAGCCAAACAGGGCCTGGGAGGAAAAGAGAGTCC  
TGCTTCTGCCTGGCTTCCCCATCGGGGAGGGGAGTTGAAGTGACAGCCTCCTGACAGCTTAGAAATGTGGAGGAC  
GCAGCAAGTTCTGGACATGGCCAGCCATATGAATGATATCTTCTCTTTCTTTGAACCATCTCCACCTGCTCTTAT  
GGACACCCCGCCTTGGGGCAAGGCAAGGGATGGGCACAACCTTGAAGATTTTGGCTTTGTGATCCTCAGTGCCA  
GTGTACCCAGATGGGCCGGAAGCTGCCTTTGAAGCCAACGAATGCCATTTGCTCTGAAAAGCAATGATGAGTCT  
CTGAGCAAAAGCCCTATGAGAGGACGGCTGCCCCACCCCGTTCCATGGCTCCCCATCGCCAGCCCCCAGCCCC  
ACCAGGTACCGCCTAGCCACACTGCACTGTGGCCCCCTTGGGAAGAGCTCTGTGCTCAGCTACTGATGGTGCCTGA  
CATGTGTTTGTATGGGGCAGGCAGGGTCTCACCTGAGCCTCACTGCCACCTAGGCAGGGTGATGGCTTTGTGTGA  
GACAGGGGAGCCATGCACAGCAGGAAATGGGGCAAACCTGTAAGGGAGGAGACCTCCTAGGAACCTGCCTACCTTC  
GAGCTGCCCCCTAGGACAACCAGCAAGTCCCTGCCCCCTCTCTGAAGCCCAGTGTTCCCATCCATCAAATGATGGCA  
TTGATCTACAAGATCTCCTTCCCCACTCTATCACTCTGTGGCTCTAGAAAGAGTTCTGAGAGGTGAAGAAATCTG  
ACCAAGAGTGTGGAGTAAATGGTGCACCCAGATTAGAATCTAAACCCCTGAAACCCACACAGCACTCTCCATC  
TTGCAGTTCACAGCTTGAGCATCCGAGGGGCATGGGAATCCACGTCTATACTCAGCCCATCTTGGCAGGCAACAT  
GCATTTATCACCACCGGGAAAGTGCCATTCAACTTAGGTACCTTACATACATCAGCTTTTGGCAACCGGGATCT  
TAATTTAAAAGACAGAGGCTCCAAAATGATTCAGGACTGGGCTGGAAAGGATACTTCTCTTTTCTTATGTCCT  
CCTTTGGCTGGTTTGAAGGGTTTGCATTGCTTCTGATTTTTCTCATTGCCCCATATGATGGGTTTCTGATTTTGA  
TGTTTTCCATAGTGAGGATGGTGTATACTAAGAAGCCAGCTTTGAGTTAGGAAGATTAGGATCCAAGTCCTAA  
CCTTAAGCAAGTGGCTTGGCTGTAAATCTTGGTGTCTCATCTTAAATGGAAATAATAGTACCTGCTGCACAG  
GTTATTAATGAGTAAGTGAGATAATTATAACATGTTGTGCAAAGTGCAAGGCTGAACATTGAATAGCAACCACAA  
TGATCATTATCATTATTGCCCCGTTGAGCTTCTGCGGCCCATACAGCCTCTCTGAGGACTCTCCCTGCACCTAG  
TTTTTGTGATGATAATGGGTGTGCTGACATGTCCCTCCTGGATGGCTTCTTCCAGCACAGCCAGCAAGCCTG  
TGCTAGGCTTACCACCGAAGCTGCCTGGCCTTGGACAAGCCATGTAGGTTCTCTGGGCTTTAGTTTTCTGGAAC  
AAATAAGAGTTTTTGAAGCTGCAAAGGACTGTACAAACGCTAGGCATCAGCTAGAATGTTGAAGAAGATGCAGGA  
CCCCTGGCCAGTCTGAATAGCAGGAATTGGGTAGGAGGGTGAGACTAAGCCACTTTTCTTATGATACTTTTGTG  
AATAAAGGGCCACTTTCCAAGCAAAAAAAAAAAAAAAAAAAAAA



57/105  
**FIGURE 56**

MAASRWARKAVVLLCASDLLLLLLLLLPPPGSCAAEGSPGTPDESTPPPRKKKKDIRDYNDADMARLLEQWEKDDD  
IEEGDLPEHKRPSAPVDFSKIDPSKPESILKMTKKGKTLMMFVTVSGSPTEKETEEITSLWQGS LFNANYDVQRF  
IVGSDRAIFMLRDGSYAWEIKDFLVGQDRCADVTLEGQVYPGKGGGSKEKNKTKQDKGKKKKEGDLKSRSSKEEN  
RAGNKREDL

58/105  
**FIGURE 57**

GGCACGAGGCGGAGTCTACGGAAGCCGTTTTTCGCTTCACTTTTCTGGCTGTAGAGCGCTTTCCCCCTGGCGGGT  
GAGAGTGCAGAGACGAAGGTGCGAGATGAGCACTATGTTTCGCGGACACTCTCCTCATCGTTTTTATCTCTGTGTG  
CACGGCTCTGCTCGCAGAGGGCATAACCTGGGTCTGGTTTACAGGACAGACAAGTACAAGAGACTGAAGGCAGA  
AGTGGAAAAACAGAGTAAAAAATTGGAAAAGAAGAAGGAAACAATAACAGAGTCAGCTGGTCGACAACAGAAAAA  
GAAATAGAGAGACAAGAAGAGAACTGAAGAATAACAACAGAGATCTATCAATGGTTCGAATGAAATCCATGTT  
TGCTATTGGCTTTTGTTTTACTGCCCTAATGGGAATGTTCAATTCCATATTTGATGGTAGAGTGGTGGCAAAGCT  
TCCTTTTACCCCTCTTTCTTACATCCAAGGACTGTCTCATCGAAATCTGCTGGGAGATGACACCACAGACTGTTT  
CTTCATTTTCTGTATATTCTCTGTACTATGTCGATTTCGACAGAACATTCAGAAGATTCTCGGCCTTGCCCTTC  
ACGAGCCGCCACCAAGCAGGCAGGTGGATTTCTTGGCCACCACCTCCTTCTGGGAAGTTCTCTTGAAGTCAAGA  
ACTCTTTATTTTCTATCATTCTTTCTAGACACACACATCAGACTGGCAACTGTTTTGTAGCAAGAGCCATAGG  
TAGCCTTACTACTTGGGCCTCTTTCTAGTTTTGAATTATTTTTAAGCCTTTTGGGTATGATTAGAGTGAAAATGG  
CAGCCAGCAAACCTTGATAGTGCTTTTGGTCCTAGATGATTTTTATCAAATAAGTGGATTGATTAGTTAAGTTT  
GTAATGTTTTATGTAATGAAAAACAAATAGCATCCTTCTTGTTCATTTACATAAGTATTTTCTGTGGGACCGACT  
CTCAAGGCACTGTGTATGCCCTGCAAGTTGGCTGTCTATGAGCATTTAGAGATTTAGAAGAAAAATTTAGTTTGT  
TTAACCCTTGTAAGTGTGTTTTGTTGTTGTTTTTTTTTCAAGCCAAATACATGACATAAGATCAATAAAGAGG  
CCAAATTTTGTAGCTGTTTTATGTACAAGGAAAAAAAAAAAAAAAAAAAAA

59/105  
**FIGURE 58**

MSTMFADTLLIVFISVCTALLAEGITWVLVYRTDKYKRLKAEVEKQSKKLEKKKETITESAGRQKKKKIERQEEK  
LKNNNRDLSMVRMKSMFAIGFCFTALMGMFNSIFDGRVVAKLPFTPLSYIQGLSHRNLLGDDTTDCSFIFLYILC  
TMSIRQNIQKILGLAPSRAATKQAGGFLGPPPPSGKFS

60/105  
**FIGURE 59**

GTTCCGCCGCCGCCGCCGCCGACCTGGAGTTTTTTCAGACTCCAGATTTCCCTGTCAACCACGAGGAGTCCAGA  
GAGGAAACGCGGAGCGGAGACAACAGTACCTGACGCCTCTTTCAGCCCGGGATCGCCCCAGCAGGGATGGCGGAC  
AAGATCTGGCTGCCCTTCCCGTGCTCCTTCTGGCCGCTCTGCCTCCGGTGCTGCTGCCTGGGGCGGCCGGCTTC  
ACACCTTCCCTCGATAGCGACTTCACCTTTACCCTTCCCGCCGCCGAGAAAGGAGTGCTTCTACCAGCCCATGCCC  
CTGAAGGCCTCGCTGGAGATCGAGTACCAAGTTTTAGATGGAGCAGGATTAGATATTGATTTCCATCTTGCCTCT  
CCAGAAGGCAAAACCTTAGTTTTTGAACAAAGAAAATCAGATGGAGTTCACACTGTAGAGACTGAAGTTGGTGAT  
TACATGTTCTGCTTTGACAATACATTCAGCACCATTCTGAGAAGGTGATTTTCTTTGAATTAATCCTGGATAAT  
ATGGGAGAACAGGCACAAGAACAAGAAGATTGGAAGAAATATATTACTGGCACAGATATATTGGATATGAACTG  
GAAGACATCCTGGAATCCATCAACAGCATCAAGTCCAGACTAAGCAAAAGTGGGCACATACAACTCTGCTTAGA  
GCATTTGAAGCTCGTGATCGAAACATACAAGAAAGCAACTTTGATAGAGTCAATTTCTGGTCTATGGTTAATTTA  
GTGGTCATGGTGGTGGTGTGAGCCATTCAAGTTTATATGCTGAAGAGTCTGTTTGAAGATAAGAGGAAAAGTAGA  
ACTTAAACTCCAACTAGAGTACGTAACATTGAAAAATGAGGCATAAAATGCAATAAACTGTTACAGTCAAGA  
CCATTAATGGTCTTCTCCAAATATTTTGAGATATAAAAGTAGGAAACAGGTATAATTTTAAATGTGAAAATTAAG  
TCTTCACTTTCTGTGCAAGTAATCCTGCTGATCCAGTTGTACTTAAGTGTGTAACAGGAATATTTTGCAGAATAT  
AGGTTTAACTGAATGAAGCCATATTAATAACTGCATTTTCCTAACTTTGAAAAATTTTGCAATGTCTTAGGTGA  
TTTAAATAAATGAGTATTGGGCCTAAA

61/105  
**FIGURE 60**

MGDKIWLPFPVLLLAALPPVLLPGAAGFTPSLDSDFTFILPAGQKECFYQPMPLKASLEIEYQVLDGAGLDIDFH  
LASPEGKTLVFEQRKSDGVHTVETEVGDYMFCDNTFSTISEKVIFFELILDNMGEQAQEQEDWKKYITGTDILD  
MKLEDILESINSIKSRLSKSGHIQTLLRAFEARDRNIQESNFDVNFWSMVNLVVMVVSAIQVYMLKSLFEDKR  
KSRT

62/105  
**FIGURE 61**

AACTGATCGCGGCCTAGTCCCGACGCGTGTGTGCTAGTGAGCCGGAGCCGGCGACGGCGGCAGTGGCGGCCCGGC  
CTGCAGGAGCCCGACGGGGTCTCTGCCATGGGGGAGTGACGCGCCTGCACCCGCTGTTCCGCGGCAGCGCGCAGAG  
CATGAGGAGACCCCGCGACAGGGGCAGCGCGCGCGGCTCGTGAGCCCCGGGATGGAGGAGAAATACGGCGGGGAC  
GTGCTGGCCGGCCCCGGCGGGCGGGCGGCCCTTGGGCCGGTGGACGTACCCAGCGCTCGATTAACAAAAATATATT  
GTGTTACTATGTTTCACTAAATTTTTGAAGGCTGTGGGACTTTTCAATCATATGATCTCCTAAAAGCTGTTTAC  
ATTGTTCA~~G~~TTCATTTTTATATTAAACTTGGGACTGCATTTTTTATGGTTTTGTTTCAAAGCCATTTTCTTCT  
GGGAAACTATTACCAAACACCAGTGGATCAAAATATTAAACATGCAGTTGCTGGGTGTATTATTTCACTCTTG  
TGGTTTTTTGGCCTCACTCTTTGTGGACCACTAAGGACTTTGCTGCTATTTGAGCACAGTGATATTGTTGTCATT  
TCACTACTCAGTGTTTTGTTCACCAGTTCTGGAGGAGGACCAGCAAAGACAAGGGGAGCTGCTTTTTTTCATTATT  
GCTGTGATCTGTTTATTGCTTTTTTGACAATGATGATCTC~~AT~~GGCTAAAATGGCTGAACACCCTGAAGGACATCAT  
GACAGTGTCTAACTCATATGCTTTACACAGCCATGCGCTTCTTAGGTGTGGCAGATCACAAGGGTGGAGTATTA  
TTGCTAGTACTGGCTTTGTGTTGTAAAGTTGGTTTTCATACAGCTTCCAGAAAGCTCTCTGTGCGACGTTGGTGGG  
GCTAAACGTCTTCAAGCTTTATCTCATCTTGTTTCTGTGCTTCTCTTGTGCCCATGGGTCAATTGTTCTTTCTGTG  
ACAACTGAGAGTAAAGTGGAGTCTTGGTTTTCTCTCATTATGCCTTTTGCAACGGTTATCTTTTTTGTGTCATGATC  
CTGGATTTCTACGTGGATTCCATTTGTTTCACTCAAAATGGAAGTTTCCAAATGTGCTCGTTATGGATCCTTTCCC  
ATTTTTATTAGTGCTCTCCTTTTTTGAAAATTTTTGGACACATCCAATAACAGACCAGCTTCGGGCTATGAACAAA  
GCAGCACACCAGGAGAGCACTGAACACGTCTGTCTGGAGGAGTGGTAGTGAGTGCTATATTCTTCATTTTGTCT  
GCCAATATCTTATCATCTCCCTCTAAGAGAGGACAAAAAGGTACCCTTATTGGATATTCTCCTGAAGGAACACCT  
CTTTATAACTTCATGGGTGATGCTTTTTCAGCATAGCTCTCAATCGATCCCTAGGTTTATTAAGGAATCACTAAAA  
CAAATTCCTTGAGGAGAGTGACTCTAGGCAGATCTTTTACTTCTTGTGCTTGAATCTGCTTTTTTACCTTTGTGGAA  
TTATTCTATGGCGTGCTGACCAATAGTCTGGGCCTGATCTCGGATGGATTCCACATGCTTTTTGACTGCTCTGCT  
TTAGTCATGGGACTTTTTTGCTGCCCTGATGAGTAGGTGGAAAGCCACTCGGATTTTCTCCTATGGGTACGGCCGA  
ATAGAAATTCGTCTGGATTATTAATGGACTTTTTCTAATAGTAATAGCGTTTTTTGTGTTTATGGAGTCAGTG  
GCTAGATTGATTGATCCTCCAGAATTAGACTCAGTGTAAACACCAGTCTCAGTTGGAGGGCTGATAGTAAAC  
CTTATTGGTATCTGTGCCCTTAGCCATGCCATAGCCATGCCATGGAGCTTCTCAAGGAAGCTGTCACTCATCT  
GATCACAGCCATTACACCATATGCATGGACACAGTGACCATGGGCATGGTCACAGCCACGGATCTGCGGGTGGG  
GGCATGAATGCTAACATGAGGGGTGTATTTCTACATGTTTTGGCAGATACTCTTGGCAGCATTGGTGTGATCGTA  
TCCACAGTTCTTATAGAGCAGTTTGGATGGTTCATCGCTGACCCACTCTGTTCTCTTTTTATTGCTATATTAATA  
TTTCTCAGTGTTGTTCCACTGATTAAAGATGCCTGCCAGGTTCTACTCCTGAGATTGCCACCAGAATATGAAAA  
GAACATACATATTGCTTTAGAAAAGATACAGAAAATGAAGGATTAATATCATACCGAGACCCTCATTTTTGGCGT  
CATTCTGCTAGTATTGTGGCAGGAACAATTCATATACAGGTGACATCTGATGTGCTAGAACAAAGAATAGTACAG  
CAGGTTACAGGAATACTTAAAGATGCTGGAGTAAACAATTTAACAATTCAGTGGAAGGAGGCATACTTTCAA  
CATATGTCTGGCCTAAGTACTGGATTTTCATGATGTTCTGGCTATGACAAAACAAATGGAATCCATGAAATACTGC  
AAAGATGGTACTTACATCATG~~TG~~AGATAACTCAAGAATTACCCCTGGAGAATAAACAATGAAGATTAAATGACTC  
AGTATTTGTAATATTGCCAGAAGGATAAAAATTACACATTAAGTGTACAGAAACAGAGTTCCCTACTACTGGATC  
AAGGAATCTTTCTTGAAGGAAATTTAAATACAGAAATGAACATTAATGGTAAAGTGGAGTAATTATTTAAATTA  
TGTGTATAAAAGGAATCAAATTTTGAGTAAACATGATGTATTACATCATCTTCGAAAATAGATATGATGGATTCT  
AGTGAAGACCAAATTAATCTCTGTTTACTTTCTATCAGGAAGCATCTCCATTGTAAATATGATTTACATGTTTA  
TTACAAAGACCCAAATGAAAAATTTTTAGTCCATTTTTGCATAGCCTAAAGATAAAATAGGAATAAAAGTTCTA  
TATTTATGGAAAAA

63/105  
**FIGURE 62**

MAKMAEHPEGHDSAL THMLYTAIAFLGVADHKGGVLLLV LALCCKVGFHTASRKLSVDVGGAKRLQALSHLVSV  
LLLCPWVIVLSVTTESKVESWFSLIMPFATVIFFVMILDFYVDSICSVKMEVSKCARYGSFFIFISALLFGNFWT  
HPITDQLRAMNKAHQESTEHVLSGGVVVSAIFFILSANILSSPSKRGQKGTIGYSPEGTPLYNFMGDAFQHSS  
QSIPRFIKESLKQILEESDSRQIFYFLCLNLLFTFVELFYGVLTNSLGLISDGFHMLFDCSALVMGLFAALMSRW  
KATRIFSYGYGRIEILSGFINGLFLIVIAFFVFME SVARLIDPPELDTHMLTPVSVGGGLIVNLIGICAF SHAHSH  
AHGASQGSCHSSDHS SHHMHGHS DHGHGSHSGSAGGGMNANMRGVFLHVLADTLGSIGVIVSTVLIEQFGWFIA  
DPLCSLFIAILIFLSVVPLIKDACQVLLRLPPEYEKELHIALEKI QKIEGLISYRDPHFWRHSASIVAGTIHIQ  
VTSDVLEQRIVQQVTGILKDAGVNNLTIQVEKEAYFQHMSGLSTGFHDVLAMTKQMESMKYCKDGTYIM

64/105  
**FIGURE 63**

GGGGCGAGACCTACGACGCCGGCGAGCAGTGGCCGTTACGCCTAAAAAGATGGCGGTCTTGGCACCTCTAATTGC  
TCTCGTGTATTCCGGTGCCGCGACTTTACGATGGCTCGCCCAACCTTACTACCTTCTGTGCGCCCTGCTCTCTGC  
TGCCCTTCCTACTCGTGAGGAAACTGCCGCCGCTCTGCCACGGTCTGCCACCCAACGCGAAGACGGTAACCCGTG  
TGACTTTGACTGGAGAGAAGTGGAGATCCTGATGTTTCTCAGTGCCATTGTGATGATGAAGAACCGCAGATCCAT  
CACTGTGGAGCAACATATAGGCAACATTTTCATGTTAGTAAAGTGGCCAACACAATTCTTTTCTCCGCTTGGG  
TATTCGCATGGGCCTACTTTACATCACACTCTGCATAGTGTTCTGATGACGTGCAAACCCCCCTATATATGGG  
CCCTGAGTATATCAAGTACTTCAATGATAAAACCAATTGATGAGGAAGTAGAACGGGACAAGAGGGTCACTTGGAT  
TGTGGAGTTCTTTGCCAATTGGTCTAATGACTGCCAATCATTTGCCCTATCTATGCTGACCTCTCCCTTAAATA  
CAACTGTACAGGGCTAAATTTTGGGAAGGTGGATGTTGGACGCTATACTGATGTTAGTACGCGGTACAAAGTGAG  
CACATCACCCCTCACCAAGCAACTCCCTACCCTGATCCTGTTCCAAGGTGGCAAGGAGGCAATGCGGCGGCCACA  
GATTGACAAGAAAGGACGGGCTGTCTCATGGACCTTCTCTGAGGAGAATGTGATCCGAGAATTTAACTTAAATGA  
GCTATACCAGCGGGCCAAGAACTATCAAAGGCTGGAGACAATATCCCTGAGGAGCAGCCTGTGGCTTCAACCCC  
CACCACAGTGTGAGATGGGGAAAACAAGAAGGATAAATAGATCCTCACTTTGGCAGTGCTTCTCTCTCTGTCAA  
TTCCAGGCTCTTTCCATAACCACAAGCCTGAGGTGCAGCTTTTATTTATGTTTTCCCTTTGGCTGTGACTGGGTG  
GGGCAGCATGCAGCTTCTGATTTTAAAGAGGCATCTAGGGAATTGTCAGGCACCCTACAGGAAGGCCTGCCATGC  
TTGTGGCCAACGTGTTTCACTGGAGCAAAGAAAGAGATCTCATAGGACGGAGGGGGAAAATGGTTTTCCCTCCAAG  
CTTGGGTCAGTGTGTTAACTGCTTATCAGCTATTCAGACATCTCCATGGTTTCTCCATGAAACTCTGTGGTTTCA  
TCATTCCTTCTTAGTTGACCTGCACAGCTTGGTTAGACCTAGATTTAACCCTAAGGTAAGATGCTGGGGTATAGA  
ACGCTAAGAATTTTCCCCAAGGACTCTTGCTTCTCAAGCCCTTCTGGCTTCGTTTATGGTCTTCATTAAAAAGT  
ATAAGCCTAACTTTGTCGCTAGTCCTAAGGAGAAACCTTTAACCACAAAGTTTTTATCATTGAAGACAATATTGA  
ACAACCCCTATTTTGTGGGGATTGAGAAGGGGTGAATAGAGGCTTGAGACTTTTCTTTGTGTGGTAGGACTTGG  
AGGAGAAATCCCTGGACTTTCACTAACCCTCTGACATACTCCCCACACCCAGTTGATGGCTTTCCGTAATAAAA  
AGATTGGGATTTTCCTTTTG



65/105  
**FIGURE 64**

MAVLAPLIALVYSVPRLSRWLAQPYLLSALLSAAFLLRKLPPLCHGLPTQREDGNPCDFDWREVEILMFLSAI  
VMMKNRRSITVEQHIGNIFMFSKVANTILFFRLDIRMGLLYITLCIVFLMTCKPPLYMGPEYIKYFNDKTIDEEL  
ERDKRVTWIVEFFANWSNDCQSFAPIYADLSLKYNCTGLNFGKVDVGRYTDVSTRYKVSTSPLTKQLPTLILFQG  
GKEAMRRPQIDKKGRAVSWTFSEENVIREFNLNELYQRAKKLSKAGDNIPEEQPVASTPTTVSDGENKKDK

66/105  
**FIGURE 65**

TGCAGTCTGTCTGAGGGCGGCCGAAGTGGCTGGCTCATTTAAGATGAGGCTTCTGCTGCTTCTCCTAGTGGCGGC  
GTCTGCGATGGTCCGGAGCGAGGCCTCGGCCAATCTGGGCGGCGTGCCAGCAAGAGATTAAAGATGCAGTACGCC  
ACGGGGCCGCTGCTCAAGTTCAGATTTGTGTTTCCTGAGGTTATAGGCGGGTGTTTGAGGAGTACATGCGGGTT  
ATTAGCCAGCGGTACCCAGACATCCGCATTGAAGGAGAGAATTACCTCCCTCAACCAATATATAGACACATAGCA  
TCTTTCTGTGCTAGTCTTCAAACCTAGTATTAATAGGCTTAATAATTGTTGGCAAGGATCCTTTTGCTTTCTTTGGC  
ATGCAAGCTCCTAGCATCTGGCAGTGGGGCCAAGAAAATAAGGTTTATGCATGTATGATGGTTTTCTTCTTGAGC  
AACATGATTGAGAACCAGTGTATGTCAAACAGGTGCATTTGAGATAACTTTAAATGATGTACCTGTGTGGTCTAAG  
CTGGAATCTGGTCACCTTCCATCCATGCAACAACCTTGTTCAAATTCTTGACAATGAAATGAAGCTCAATGTGCAT  
ATGGATTCAATCCACACCATCGATCATAGCACCACTATCAGCACTGAAAACCTCTTTTGCAATTAAGGGATCATT  
GCAAGAGCAGCGTGACTGACATTATGAAGGCCTGTACTGAAGACAGCAAGCTGTTAGTACAGACCAGATGCTTTC  
TTGGCAGGCTCGTTGTACCTCTTGGAACCTCAATGCAAGATAGTGTTTCAGTGCTGGCATATTTTGGAATTCT  
GCACATTGAGAGTGCAATAATACTGTATAGCTTTCCCCACCTCCCACAAAATCACCAGTTAATGTGTGTGT  
GTGTGTTTTTTTTTAAGGTAAACATTACTTGTGAACTTTTTTTCTTTAGTCATATTGGAAAAAGTAGAAAATT  
GGAGTTACATTTGGATTTTTTTTCCAA

67/105  
**FIGURE 66**

MQYATGPLLKFQICVSXGYRRVFEEYMRVISQRYPDIRIEGENYLPQPIYRHIASFLSVFKLVLIIGLIIVGKDPF  
AFFGMQAPSIWQWGQENKVYACMMVFFLSNMIENQCMSTGAFEITLNDVPVWSKLESGHLPSMQQLVQILDNEMK  
LNVHMDSIPHRS

[illegible]

69/105  
**FIGURE 68**

MEEGGGGVRSIVPGGPVLLVLCGLLEASGGGRALPQLSDDIPFRVNWPGTEFSLPTTGVLKEDNYVIMTTAHKE  
KYKCILPLVTSGDEEEKDYKGPNPRELLEPLFKQSSCSYRIESYWTYEVCHGKHIRQYHEEKETGQKINIHEYY  
LGNMLAKNLLFEKEREAEKEKSNEIPTKNIEGQMTPIYPVGMGNGTPCSLKQNRPRSSTVMYICHPEKHEILS  
VAEVTTCYEVVILTPLLCSHPKYRFRASPVNDIFCQSLPGSPFKPLTLRQLEQQEEILRVPFRRNKEEDLQSTK  
EERFFPAIHKSIAIGSQPVLTVGTTTHISKLTDQDLIKEFLSGSYCFRGGVGWWKYEF CYGKHVHQYHEDKDSGKTS  
VVVG TWNQEEHIEWAKKNTARAYHLQDDGTQTVRMVSHFYGN GDICDI TDKPRQVTVKLKCKESDSPHAVTVYML  
EPHSCQYILGVESPVICKILDTADENGLLSLPN

70/105  
**FIGURE 69**

AACAATAGGAAACGTCAAAATTGGGATAGTCGGCAGTTCTGGCCCCTGCAGCTGGAGGTACCCTGAGTTCTGAGG  
GTCGTAGTGCTGTTTTCTGGTATTCTCATCGCGGTCACCTCTACCGGTGTGGACAAAGTAAAGTTTGAATCAGCTTC  
TCCATGGCCTGGGCACCAGTTCCCGGCTGAGCCATTTTCCTTTTGGCTAAAAGTCCCCGCCAGAGGCCAATTTCG  
TCGCGGCGGGCGGTGGAGATCGCAGGTGCGTCAGGCTTGCAATGGGTTGTGGAGAGTGGTCAGAAACC  
AGCAGCTGCAACAAGAAGGCTACAGTGAGCAAGGCTACCTCACCAGAGAGCAGAGCAGGAGAATGGCTGCGAGCA  
ACATTTCTAACACCAATCATCGTAAACAAGTCCAAGGAGGCATTGACATATATCATCTTTTGAAGGCAAGGAAAT  
CGAAAGAACAGGAAGGATTCATTAATTTGGAAATGTTGCCTCCTGAGCTAAGCTTTACCATCTTGTCTACCTGA  
ATGCAACTGACCTTTGCTTGGCTTCATGTGTTTGGCAGGACCTTGCGAATGATGAACTTCTCTGGCAAGGGTTGT  
GCAATCCACTTGGGGTCACTGGTCCATATACAATAAGAACCACCTTTAGGATTTCTTTTAGAAAAGTGTATA  
TGCAGCTGGATGAAGGCAGCCTCACCTTTAATGCCAACCAGATGAGGGAGTGAACCTACTTTATGTCCAAGGGTA  
TCCTGGATGATTGCGCAAAGGAAATAGCAAAGTTTATCTTCTGTACAAGAACTAAATTGGAAAAAACTGAGAA  
TCTATCTTGATGAAAGGAGAGATGTCTTGATGACCTTGTAACATTGCATAATTTTAGAAATCAGTTCTTGCCAA  
ATGCACTGAGAGAATTTTTTCGTCATATCCATGCCCTGAAGAGCGTGGAGAGTATCTTGAACTCTTATAACAA  
AGTTCTCACATAGATTCTGTGCTTGCAACCCTGATTTAATGCGAGAAGTTGGCCTTAGTCCTGATGCTGTCTATG  
TACTGTGCTACTCTTTGATTCTACTTTCCATTGACCTCACTAGCCCTCATGTGAAGAATAAAATGTCAAAAAGGG  
AATTTATTGAAATACCCGTCGCGCTGCTCAAAATATTAGTGAAGATTTTGTAGGGCATCTTTATGACAATATCT  
ACCTTATTGGCCATGTGGCTGCA**TAAAA**AGCACAATTGCTAGGACTTCAGTTTTTACTTCAGACTAAAGCTACCC  
AAGGACTTAGCAGATATGGGGGTACATCAGTGCTGGTCATTGTAGCCTGAGTATACAATCAAGCTTCAGTGTGC  
AACCTTTTTTTCTTTTGCCATTTTCTATTTTAGTAATTTCTTGGGGAAGTAAATAATTTTGCAGAATTTTTCT  
AATTTTGTATATCACGTTTTTGACAAAGCAGAGCCACTGTCTAACACAGCTGTTAACGAATGATAAACTGACATT  
ATACTCTAAAAGATGGTGTATTTGTGCATTAGATTGCTGAAAACTTTATCCATTTCATTCTTTATACAAAT  
ACCATGTAATGTGTACATATTTAACTAAAGAGATTATAGTCATAATTATTTTATTGTAAAGATTTTAACTAAAG  
TTTTTCCTTTTCTCTCAAACTGAGTTCTGAAATTTATTTGATTCTGATCTGAACTATTGTCTTCGTAAAAGTTA  
GATCTGACTTCAGACAGAAACCAATACCAGCTTCCTTTTCTTTAACTTTGAAGAGTGTGATTGTGTTACTATA  
TTACTATGCAAACTGGCAGTTATTTTATAATAATAAATTTATAATTTGATTTTTTATTTTAAAACTGGGTAA  
TCAAGTCTCGGTAAGTCCTTTAAACCATTAGGATTTTAAACATCAAAATTTATGATTTACATTTCATAGGAAT  
AAAATAAAATATTATTAGAAGTCTGGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

71/105  
**FIGURE 70**

MGQGLWRVVRNQQLQQEGYSEQGYLTREQSRRMAASNISNTNHRKQVQGGIDYHLLKARKSKEQEGFINLEMLP  
PELSFTILSYLNATDLCLASCWQDLANDELLWQGLCKSTWGHWSIYNKNPPLGFSFRKVYMQLDEGSLTFNANP  
DEGVNYFMSKGILDDSPKEIAKFIFCTRILNWKKLRIYLDERRDVLDDLVTLHNFRNQFLPNALREFFRHHAPE  
ERGEYLETLITKFSHRFCACNPDLRELGLSPDAVYVLCYSLILLSIDLTSPHVKNKMSKREFIRNTRRAAQNIS  
EDFVGHLVDNIYLIGHVAA

72/105  
**FIGURE 71**

TGAGAGTCCTCTAGACAGGCGCTCCTCGCAGCACCGTAGTGCGCTTGCGCTGAGCAGCCGCGAGGGCGGAAGTG  
GGAGCTGCGACCGCGCTCCCTGTGAGGTGGGCAAGCGGCGAAATGCGCCCTCCGGGAGTCTTGCAAGTTCCCTG  
GCAGTCCTGGTGCTGTTGCTTTGGGGTGCTCCCTGGACGCACGGGCGGCGGAGCAACGTTTCGCGTCATCACGGAC  
GAGAACTGGAGAGAACTGCTGGAAGGAGACTGGATGATAGAATTTTATGCCCGTGCGTGCCTGCTTGTCAAAAT  
CTTCAACCGGAATGGGAAAGTTTTGCTGAATGGGGAGAAGATCTTGAGGTTAATATTGCGAAAGTAGATGTCACA  
GAGCAGCCAGGACTGAGTGGACGGTTTATCATAACTGCTCTTCTACTATTTATCATTGTAAAGATGGTGAAATTT  
AGGCGCTATCAGGGTCCAAGGACTAAGAAGGACTTCATAAACTTTATAAGTGATAAAGAGTGGAAGAGTATTGAG  
CCCGTTTCATCATGGTTTGGTCCAGGTTCTGTTCTGATGAGTAGTATGTCAGCACTCTTTCAGCTATCTATGTGG  
ATCAGGACTTGCCATAACTACTTTATTGAAGACCTTGGATTGCCAGTGTGGGGATCATATACTGTTTTTGCTTTA  
GCAACTCTGTTTTCCGGACTGTTATTAGGACTCTGTATGATATTTGTGGCAGATTGCCTTTGTCCTTCAAAAAGG  
CGCAGACCACAGCCGTACCCATACCCTTCAAAAAAATTATTATCAGAATCTGCACAACCTTTGAAAAAAGTGAG  
GAGGAACAAGAGGCGGATGAAGAAGATGTTTCAGAAGAAGAAGCTGAAAGTAAAGAAGGAACAAACAAAGACTTT  
CCACAGAATGCCATAAGACAACGCTCTCTGGGTCCATCATTGGCCACAGATAAATCCTAGTTAAATTTTATAGTT  
ATCTTAATATTATGATTTTGATAAAAACAGAAGATTGATCATTTTGTGTTTGAAGTGAAGTGTGACTTTTTT  
GAATATTGCAGGGTTCAGTCTAGATTGTCATTAAATTGAAGAGTCTACATTCAGAACATAAA



73/105

**FIGURE 72**

MAPSGSLAVPLAVLVLLLWGAPWTHGRRSNVRVITDENWRELLEGDWMIEFYAPWCPACQNLQPEWESFAEWGED  
LEVNIAKVDVTEQPGLSGRFIITALPTIYHCKDGEFRRYQGPRKKDFINFISDKEWKSIEPVSSWFGPGSVLMS  
SMSALFQLSMWIRTCHNYFIEDLGLPVWGSYTVFALATLFSGLLLGLCMIFVADCLCPSKRRRPQYPYPYPSKKLL  
SESAQPLKKVEEEQEAEDEEDVSEEEAESKEGTNKDFQNAIRQRS LGPSLATDKS

74/105  
**FIGURE 73**

GCGGCGGCGGCAGCGGCGGCGACGGCGACATGGAGAGCGGGGCCTACGGCGCGGCCAAGGCGGGCGGCTCCTTCG  
ACCTGCGGCGCTTCCTGACGCAGCCGCAGGTGGTGCGCGCGCCGTGTGCTTGGTCTTCGCCTTGATCGTGTTCT  
CCTGCATCTATGGTGAGGGCTACAGCAATGCCCACGAGTCTAAGCAGATGTACTGCGTGTTCAACCGCAACGAGG  
ATGCCTGCCGCTATGGCAGTGCCATCGGGGTGCTGGCCTTCCTGGCCTCGGCTTTCTTCTTGGTGGTCGACGCGT  
ATTTCCTGAGATCAGCAACGCCACTGACCGCAAGTACCTGGTCATTGGTGACCTGCTCTTCTCAGCTCTCTGGA  
CCTTCCTGTGGTTTGTGGTTTCTGCTTCCTCACCAACCAGTGGGCAGTCACCAACCCGAAGGACGTGCTGGTGG  
GGGCGACTCTGTGAGGGCAGCCATCACCTTCAGCTTCTTTTCCATCTTCTCCTGGGGTGTGCTGGCCTCCCTGG  
CCTACCAGCGCTACAAGGCTGGCGTGGACGACTTCATCCAGAATTACGTTGACCCCACTCCGGACCCCAACTG  
CCTACGCTCCTACCCAGGTGCATCTGTGGACAAC TACCAACAGCCACCCTTCACCCAGAACGCGGAGACCACCG  
AGGGCTACCAGCCGCCCCCTGTGTACTTGAGCGGCGGTTAGCGTGGGAAGGGGGACAGAGAGGGCCCTCCCCTCTG  
CCCTGGACTTTCCCATGAGCCTCCTGGAAGTGCAGCCCTCTCTTTACCTGTTCCATCCTGTGCAGCTGACAC  
ACAGCTAAGGAGCCTCATAGCCTGGCGGGGGCTGGCAGAGCCACACCCCAAGTGCCTGTGCCCAGAGGGCTTCAG  
TCAGCCGCTCACTCCTCCAGGGCACTTTTAGGAAAGGGTTTTTAGCTAGTGTTTTTCTCGCTTTTAAATGACCTC  
AGCCCCGCCTGCAGTGGCTAGAAGCCAGCAGGTGCCATGTGCTACTGACAAGTGCCTCAGCTTCCCCCGGGCC  
GGGTCAGGCCGTGGGAGCCGCTATTATCTGCGTTCTCTGCCAAAGACTCGTGGGGGCCATCACACCTGCCCTGTG  
CAGCGGAGCCGGACCAGGCTCTTGTGTCCTCACTCAGGTTTGCTTCCCCTGTGCCCACTGCTGTATGATCTGGGG  
GCCACCACCCTGTGCCGTGGCCTCTGGGCTGCCTCCCGTGGTGTGAGGGCGGGGCTGGTGTCTATGGCACTTCC  
TCCTTGCTCCCACCCCTGGCAGCAGGGAAGGGCTTTGCCTGACAACACCCAGCTTTATGTAAATATTCTGCAGTT  
GTTACTTAGGAAGCCTGGGAGGGCAGGGGTGCCCCATGGCTCCCAGACTCTGTCTGTGCCGAGTGATTATAAA  
ATCGTGGGGGAGATGCCCGCCTGGGATGCTGTTTGGAGACGGAATAAATGTTTTCTCATTAGTA

75/105  
**FIGURE 74**

MESGAYGAAGGSFDLRRFLTQPQVVARAVCLVFALIVFSCIYGEYSGYNAHESKQMYCVFNRNEDACRYGSAIG  
VLAFLASAFFLVVDAYFPQISNATDRKYLFIGDLLFSALWTFWVVGFCFLTNQWAVTNPKDVLVGADSVRAAIT  
FSFFSIFSWGVLASLAYQRYKAGVDDFIQNYVDPTPDPNTAYASYPGASVDNYQQPPFTQNAETTEGYQPPPVY

76/105  
**FIGURE 75**

CAGAGCTGCTGTCATGGCGGCCGCTCTGTGGGGCTTCTTTCCCGTCCTGCTGCTGCTGCTGCTATCGGGGGATGT  
CCAGAGCTCGGAGGTGCCCCGGGGCTGCTGCTGAGGGATCGGGAGGGAGTGGGGTCGGCATAGGAGATCGCTTCAA  
GATTGAGGGGCGTGCA GTTGTTCAGGGGTGAAGCCTCAGGACTGGATCTCGGCGGCCCGAGTGTGGTAGACGG  
AGAAGAGCACGTCCGTTTCCTTAAGACAGATGGGAGTTTTGTGGTTCATGATATACCTTCTGGATCTTATGTAGT  
GGAAGTTGTATCTCCAGCTTACAGATTTGATCCCGTTTCGAGTGGATATCACTTCGAAAGGAAAAATGAGAGCAAG  
ATATGTGAATTACATCAAAACATCAGAGGTTGTCA GACTGCCCTATCCTCTCCAAATGAAATCTTCAGGTCCACC  
TTCTTACTTTATTAAAAAGGGAATCGTGGGGCTGGACAGACTTTCTAATGAACCCAATGGTTATGATGATGGTTCT  
TCCTTTATTGATATTTGTGCTTCTGCCTAAAGTGGTCAACACAAGTGATCCTGACATGAGACGGGAAATGGAGCA  
GTCAATGAATATGCTGAATTCCAACCATGAGTTGCCTGATGTTTCTGAGTTCATGACAAGACTCTTCTTTCAAA  
ATCATCTGGCAAATCTAGCAGCGGCAGCAGTAAAA CAGGCAAAAAGTGGGGCTGGCAAAGGAGGTAGTCAGGCCG  
TCCAGAGCTGGCATTTCACAAACACGGCAACACTGGGTGGCATCCAAGTCTTGGAAAACCGTGTGAAGCAACTA  
CTATAAACTTGAGTCATCCCGACGTTGATCTCTTACA ACTGTGTATGTTAACTTTTTAGCACATGTTTTGTACTT  
GGTACACGAGAAAAACCCAGCTTTCATCTTTTGTCTGTATGAGGTCAATATTGATGTCACTGAATTAATTACAGTG  
TCCTATAGAAAATGCCATTAATAAATTATGAAC TACTATACATTATGTATATTAATTAAAACATCTTAATCCA  
GAAAAAAAAAAAAAAAAAAAAA

77/105  
**FIGURE 76**

MAAALWGFFPVLLLLLLSGDVQSSEVPGAAAE GSGSGVGIGDRFKIEGRAVVPGVKPDWISAARVLVDGEEHV  
GFLKTDGSFVVHDIPSGSYVVEVVSPAYRFD PVRVDITSKGKMRARYVNYIKTSEVVRLPYPLQMKSSGPPSYFI  
KRESWGWTDFLMNPMVMMMLVLP LLIFVLLPKVVNTSDPDMRREMEQSMNMLNSNHELDPVSEFMTRLFSSKSSGK  
SSSGSSKTGKSGAGKRR

78/105  
**FIGURE 77**

TGGGACTTATAGAAGGGAGAGGAGCGAACATGGCAGCGCGTTGGCGGTTTTGGTGTGTCTCTGTGACCATGGTGG  
TGGCGCTGCTCATCGTTTTGCGACGTTCCCTCAGCCTCTGCCCAAAGAAAGAAGGAGATGGTGTATCAGAAAAGG  
TTAGTCAGCTGATGGAATGGACTAACAAAAGACCTGTAATAAGAATGAATGGAGACAAGTTCGGTCGCCTTGTGA  
AAGCCCCACCGAGAAATTACTCCGTTATCGTCATGTTCACTGCTCTCCAAGTGCATAGACAGTGTGTCGTTTGCA  
AGCAAGCTGATGAAGAATTCCAGATCCTGGCAAAC TCCTGGCGATACTCCAGTGCATTACCAACAGGATATTTTT  
TTGCCATGGTGGATTTTGATGAAGGCTCTGATGTATTTAGATGCTAAACATGAATTCAGCTCCAACCTTTCATCA  
ACTTTCCTGCAAAAGGGAAACCCAAACGGGGTGATACATATGAGTTACAGGTGCGGGGTTTTTCAGCTGAGCAGA  
TTGCCCCGGTGGATCGCCGACAGAACTGATGTCAATATTAGAGTGATTAGACCCCAAATTATGCTGGTCCCCCTTA  
TGTTGGGATTGCTTTTGGCTGTTATTGGTGGACTTGTGTATCTTCGAAGAAGTAATATGGAATTTCTCTTTAATA  
AAACTGGATGGGCTTTTGCAGCTTTGTGTTTTGTGCTTGCTATGACATCTGGTCAAATGTGGAACCATATAAGAG  
GACCACCATATGCCATAAGAATCCCCACACGGGACATGTGAATTATATCCATGGAAGCAGTCAAGCCCCAGTTTG  
TAGCTGAAACACACATTGTTCTTCTGTTTAAATGGTGGAGTTACCTTAGGAATGGTGTCTTTTGTGTGAAGCTGCTA  
CCTCTGACATGGATATTGGAAAGCGAAAGATAATGTGTGTGGCTGGTATTGGACTTGTGTATTATTCCTTCAGTT  
GGATGCTCTCTATTTTTAGATCTAAATATCATGGCTACCCATACAGCTTTCTGATGAGTTTAAAAAGGTCCCAGAG  
ATATATAGACACTGGAGTACTGGAAATTGAAAAACGAAAAATCGTGTGTGTTTGAAAAGAAGAATGCAACTTGTAT  
ATTCTGTATTACCTCTTTTTTTTCAAGTGATTTAAATAGTTAATCATTTAACCAGAAAGATGTGTAGTGCCTTAA  
CAAGCAATCCTCTGTCAAAATCTGAGGTATTTGAAAATAATTATCCTCTTAACCTTCTCTTCCCAGTGAACTTTA  
TGGAACATTTAATTTAGTACAATTAAGTATATTATAAAAAATTGTAAACTACTACTTTGTTTTAGTTAGAACAAA  
GCTCAAAACTACTTTAGTTAACTTGGTCATCTGATCTTATATTGCCTTATCCAAAGATGGGGAAAGTAAGTCCTG  
ACCAGGTGTTCCCACATATGCCTGTTACAGATAACTACATTAGGAATTCATTCTTAGCTTCTTCATCTTTGTGTG  
GATGTGTATACTTTACGCATCTTTCTTTTTGAGTAGAGAAATTATGTGTGTGTCATGTGGTCTTCTGAAAATGGAAC  
ACCATTCTTCAGAGCACACGTCTAGCCCTCAGCAAGACAGTTGTTTCTCCTCCTCCTTGCAATTTCTACTGCG  
CTCCAGCCTGAGTGATAGAGTGAGACTCTGTCTCAAAAAAAAAGTATCTCTAAATACAGGATTATAATTTCTGCT  
TGAGTATGGTGTAACTACCTTGTATTTAGAAAGATTTAGATTTCATTCCATCTCCTTAGTTTTCTTTAAGGTG  
ACCCATCTGTGATAAAAAATATAGCTTAGTGCTAAAATCAGTGTAACCTTATACATGGCCTAAAATGTTTCTACAAA  
TTAGAGTTTTGTCACTTATTCCATTTGTACCTAAGAGAAAAATAGGCTCAGTTAGAAAAGGACTCCCTGGCCAGGC  
GCAGTGACTTACGCCTGTAATCTCAGCACTTTGGGAGGCCAAGGCAGGCAGATCACGAGGTCAGGAGTTCGAGAC  
CATCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATATAAAAATTAGCTGGGTGTGGTGGCAGGAGCCTG  
TAATCCCAGCTGCACAGGAGGCTGAGGCACGAGAACTCACTTGAACCTCAGGAGATGGAGGTTTCAGTGAGCCGAGA  
TCACGCCACTGCACTCCAGCCTGGCAACAGAGCGAGACTCCATCTCAAAAAAAAAAAAAAAAAAAAAA

79/105  
**FIGURE 78**

MAARWRFWCVSVTMVALLIVCDVPSASAQRKKEMVLSEKVSQLMEWTKRNPVIRMNGDKFRRLVKAPPRNYSVI  
VMFTALQLHRQCVVCKQADEEFQILANSWRYSSAF TNRIFFAMVDFDEGSDVFQMLNMNSAPTFINFPAGKPKR  
GDTYELQVRGFSAEQIARWIADRTDVNIRVIRPPNYAGPLMLGLLAVIGGLVYLRRSNMEFLFNKTGWAFALC  
FVLAMTSGQMWNHIRGPPYAHKNPHTGHVNYIHGS SQAQFVAETHIVLLFNNGVTLGMVLLCEAATSDMDIGKRK  
IMCVAGIGLVVLEFFSWMLSIFRSKYHGYPYSFLMS

80/105  
**FIGURE 79**

GGGGGAGGCCCGCGTCGATCCTGGGTTGGAGGAGGTGGCGGCCGCTGAGGCTGCGGCGTGAAGACGGCGGGCATG

GTGGGGCGGGAGAAAGAGCTCTCTATACACTTTGTTCCCGGGAGCTGTCGGCTGGTGGAGGAGGAAGTTAACATC  
CCTAATAGGAGGGTTCTGGTTACTGGTGCCACTGGGCTTCTTGGCAGAGCTGTACACAAAGAATTTAGCAGAAAT  
AATTGGCATGCAGTTGGCTGTGGTTTCAGAAGAGCAAGACCAAATTTGAACAGGTTAATCTGTTGGATTCTAAT  
GCAGTTCATCACATCATTTCATGATTTTCAGCCCCATGTTATAGTACATTGTGCAGCAGAGAGAAGACCAGATGTT  
GTAGAAAATCAGCCAGATGCTGCCTCTCAACTTAATGTGGATGCTTCTGGGAATTTAGCAAAGGAAGCAGCTGCT  
GTTGGAGCATTTCTCATCTACATTAGCTCAGATTATGTATTTGATGGAACAAATCCACCTTACAGAGAGGAAGAC  
ATACCAGCTCCCCTAAATTTGTATGGCAAAACAAAATTAGATGGAGAAAAGGCTGTCCTGGAGAACAAATCTAGGA  
GCTGCTGTTTTGAGGATTCTATTTCTGTATGGGGAAGTTGAAAAGCTCGAAGAAAGTGCAGTGACTGTTATGTTT  
GATAAAGTGCAGTTCAGCAACAAGTCAGCAACATGGATCACTGGCAGCAGAGGTTCCCCACACATGTCAAAGAT  
GTGGCCACTGTGTGCCGGCAGCTAGCAGAGAAGAGAATGCTGGATCCATCAATTAAGGGAACCTTTCACTGGTCT  
GGCAATGAACAGATGACTAAGTATGAAATGGCATGTGCAATTGCAGATGCCCTTCAACCTCCCCACCACTCACTTA  
AGACCTATTACTGACAGCCCTGTCCTAGGAGCACAACGTCCGAGAAATGCTCAGCTTGACTGCTCCAAATTGGAG  
ACCTTGGGCATTGGCCAACGAACACCATTTTGAATTGGAATCAAAGAATCACTTTGGCCTTTTCTCATTGACAAG  
AGATGGAGACAAACGGTCTTTTCATTAGTTTTATTTGTGTTGGGTTCTTTTTTTTTTTTAAATGAAAAGTATAGTATG  
TGGCCCTTTTTTAAAGAACAAAGGAAATAGTTTTGTATGAGTACTTTAATTGTGACTCTTAGGATCTTTCAGGTAA  
ATGATGCTCTTGCAGTGTGAAATTGTCTAAAGAACTAAAGGGCAGTCATGCCCTGTTTGCAGTAATTTTTCTT  
TTTATCATTATGTTTGTCTGGCTAAACTTGGAGTTTGAGTATAGTAAATTATGATCCTTAAATATTTGAGGGTC  
AGGATGAAGCAGATCTGCTGTAGACTTTTTAGATGAAATTGTTTCATTCTCGTAACCTCCATATTTTCAGGATTTT  
TGAAGCTGTTGACCATTTTCATGTTGATTATTTTAAATTGTGTGGAATAGTATAAAATCATTGGTGTTCATTATT  
TGCTTTGCCTGAGCTCAGATCAAAATGTTTGAAGAAAGGAACCTTTATTTTTGCAAGTTACGTACAGTTTTTATGC  
TTGAGATATTTCAACATGTTATGTATATTGGAACCTTCTACAGCTTGATGCCTCCTGCTTTTATAGCAGTTTATGG  
GGAGCACTTGAAAGAGCGTGTGTACATGTATTTTTTTCTAGGCCAAACATTGAATGCAAACGTGTATTTTTTTAA  
TATAAATATATAACTGTCCTTTTTCATCCCATGTTGCCGCTAAGTGATATTTTCATATGTGTGGTTATACTCATAAT  
AATGGGCCCTTGTAAGTCTTTTACCATTTCATGAATAATAATAAATATGTACTGCTGGCATGTAATGCTTAGTTTT  
CTTGATTTACTTCTTTTTTTTTTAAATGTAAGGACCAAACTTCTAACTAATTGTTCTTTTGTGCTTTAATTTTT  
AAAAATTACATTCTTCTGATGTAACATGTGATACATACAAAAGAATATAGTTTAATATGTATTGAAATAAAACAC  
AATAAAATTAATAAAAAAAAAAAAAAAAAAAAAA



81/105  
**FIGURE 80**

MVGREKELSIHFVPGSCLVVEEVNIPNRRVLVTGATGLLGRAVHKEFQQNNWHAVGCGFRRARPKFEQVNLLDS  
NAVHHIIHDFQPHVIVHCAAERRPDVVENQPDAASQLNVDASGNLAKEAAAVGAFLIYISSDYVFDGTNPPYREE  
DIPAPLNLYGKTKLDGEKAVLENNLGAAVLRIPILYGEVEKLEESAVTVMFDKVQFSNKSANMDHWQQRFP THVK  
DVATVCRQLAEKRMLDPSIKGTFHWSGNEQMTKYEMACAIADAFNLPSHLRPITDSPVLGAQRPRNAQLDCSKL  
ETLGIGQRTPFIRIGIKESLWPFLIDKRWRQTVFH

82/105  
**FIGURE 81**

GAAGCAGCAGGTACCCCCCTCCACATCCCTAGGGCTCTGTGATGTAGGCAGAGGCCCGTGGGAGTCAGCATGCGCGC  
GTGGCTGGGCGCCCCCTTGCTCCTGCTGCTGCTCCAGGGAGGCTGGGGCTGCCCGACCTCGTCTGCTACACCG  
ATTACCTCCAGACGGTCATCTGCATCCTGGAAATGTGGAACCTCCACCCCAGCACGCTCACCCTTACCTGGCAAG  
ACCAGTATGAAGAGCTGAAGGACGAGGCCACCTCCTGCAGCCTCCACAGGTTCGGCCACAAATGCCACGCATGCCA  
CCTACACCTGCCACATGGATGTATTCCACTTCATGGCCGACGACATTTTCAGTGTCAACATCACAGACCAGTCTG  
GCAACTACTCCAGGAGTGTGGCAGCTTTCTCCTGGCTGAGAGCATCAAGCCGGCTCCCCCTTTCAACGTGACTG  
TGACCTTCTCAGGACAGTATAATATCTCCTGGCGCTCAGATTACGAAGACCTGCCTTCTACATGCTGAAGGGCA  
AGCTTCAGTATGAGCTGCAGTACAGGAACCGGGGAGACCCCTGGGCTGTGAGTCCGAGGAGAAAGCTGATCTCAG  
TGGACTCAAGAAGTGTCTCCCTCCTCCCCCTGGAGTTCCGCAAAGACTCGAGCTATGAGCTGCAGGTGCGGGCAG  
GGCCCATGCCTGGCTCCTCCTACCAGGGGACCTGGAGTGAATGGAGTGACCCGGTCATCTTTCAGACCCAGTCAG  
AGGAGTTAAAGGAAGGCTGGAACCCCTCACCTGCTGCTTCTCCTCCTGCTTGTATAGTCTTCATTCTGCCTTCT  
GGAGCCTGAAGACCCATCCATTGTGGAGGCTATGGAAGAAGATATGGGCCGTCCCCAGCCCTGAGCGGTTCTTCA  
TGCCCCCTGTACAAGGGCTGCAGCGGAGACTTCAAGAAATGGGTGGGTGCACCCCTTCACTGGCTCCAGCCTGGAGC  
TGGGACCCCTGGAGCCAGAGGTGCCCTCCACCCCTGGAGGTGTACAGCTGCCACCCACCACGGAGCCCGGCCAAGA  
GGCTGCAGCTCACGGAGCTACAAGAACCAGCAGAGCTGGTGGAGTCTGACGGTGTGCCAAGCCAGCTTCTGGC  
CGACAGCCCAAGAACTCGGGGGGCTCAGCTTACAGTGAAGAGAGGGATCGGCCATACGGCCTGGTGTCCATTGACA  
CAGTGACTGTGCTAGATGCAGAGGGGCCATGCACCTGGCCCTGCAGCTGTGAGGATGACGGCTACCCAGCCCTGG  
ACCTGGATGCTGGCCTGGAGCCCAAGCCAGGCCTAGAGGACCCACTCTTGGATGCAGGGACACAGTCTGTCTCT  
GTGGCTGTGTCTCAGCTGGCAGCCCTGGGCTAGGAGGGCCCCCTGGGAAGCCTCCTGGACAGACTAAAGCCACCCC  
TTGCAGATGGGGAGGACTGGGCTGGGGGACTGCCC TGGGGTGGCCGGTCACTGGAGGGGTCTCAGAGAGTGAGG  
CGGGCTCACCCCTGGCCGGCCTGGATATGGACACGTTTGACAGTGGCTTTGTGGGCTCTGACTGCAGCAGCCCTG  
TGGAGTGTGACTTCACAGCCCCGGGGACGAAGGACCCCCCGGAGCTACCTCCGCCAGTGGGTGGTCATTCTC  
CGCCACTTTTCAGCCCTGGACCCAGGCCAGCTAATGAGGCTGACTGGATGTCCAGAGCTGGCCAGGCCACTGGG  
CCCTGAGCCAGAGACAAGGTACCTGGGCTGTGATGTGAAGACACCTGCAGCCTTTGGTCTCCTGGATGGGCCCTT  
TGAGCCTGATGTTTACAGTGTCTGTGTGTGTGTGTGCATATGTGTGTGTGTGCATATGCATGTGTGTGTGTGT  
GTGTCTTAGGTGCGCAGTGGCATGTCCACGTGTGTGTGTGATTGCACGTGCCCTGTGGGCCTGGGATAATGCCCAT  
GGTACTCCATGCATTACCTGCCCTGTGCATGTCTGGACTCACGGAGCTCACCCATGTGCACAAGTGTGCACAGT  
AAACGTGTTTGTGGTCAACAGATGACAACAGCCGTCTCCTCCTTAGGGTCTTGTGTTGCAAGTTGGTCCACAGC  
ATCTCCGGGGCTTTGTGGGATCAGGGCATTGCCTGTGACTGAGGCGGAGCCCAGCCCTCCAGCGTCTGCCTCCAG  
GAGCTGCAAGAAGTCCATATTGTTCTTATCACCTGCCAACAGGAAGCGAAAGGGGATGGAGTGAGCCCATGGTG  
ACCTCGGGAATGGCAATTTTTTGGGCGGCCCTGGACGAAGGTCTGAATCCCGACTCTGATACCTTCTGGCTGTG  
CTACCTGAGCCAAGTCGCCTCCCCCTCTCTGGGCTAGAGTTTCTTATCCAGACAGTGGGGAAGGCATGACACACC  
TGGGGGAAATTGGCGATGTACCCGTGTACGGTACGCAGCCCAGAGCAGACCCTCAATAAACGTGAGCTTCTTCT  
CTTCTGCGGCCAGAGCCGAGGCGGGCGGGGGTGAAGAACATCAATCGTCAGCGACAGCCTGGGCACCCGCGGGGCC  
GTCCCGCCTGCAGAGGGCCACTCGGGGGGGTTTCAGGCTTAAATCAGTCCGTTTTCGTCTCTTGGAAACAGCTC  
CCCACCAACCAAGATTTCTTTTTCTAACTTCTGCTACTAAGTTTTTAAAAATTCCTTTATGCACCAAGAGATA  
TTTATTAAACACCAATTACGTAGCAGGCCATGGCTCATGGGACCCACCCCGTGGCACTCATGGAGGGGGCTGC  
AGGTTTGAACATATGCAGTGTGCTCCGGCCACACATCCTGCTGGGCCCCCTACCCTGCCCCAATTCAATCCTGCCA  
ATAAATCCTGTCTTATTTGTTTCATCCTGGAGAATTGA

83/105  
**FIGURE 82**

MPRGWAAPLLLLLLQGGWGCPDLVCYTDYLQTVICILEMWNLHPSTLTTLTWQDQYEELKDEATSCSLHRSAHNAT  
HATYTTCHMDVVFHFMADDIFSVNITDQSGNYSQECGSFLLAESIKPAPPFNVTVTFSGQYNISWRSDYEDPAFYML  
KGKLQYELQYRNRGDPWAVSPRRKLISVDSRSVSLPLEFRKDSSYELQVRAGPMPGSSYQGTWSEWSDPVIFQT  
QSEELKEGWNPHLLLLLLLLLVIVFIPAFWSLKTHPLWRLWKKIWAVPSPERFFMPLYKGCSGDFKKWVGAPFTGSS  
LELGWSPPEVPSTLEVYSCHPPRSPAKRLQLTELQEPALVESDGVPKPSFWPTAQNSGGSAYSEERDRPYGLVS  
IDTVTVLDAEGPCTWPCSCEDDGYPALDLDAGLEPSPGLEDPLLDAGTTVLSCGCVSAGSPGLGGPLGSLLDRLK  
PPLADGEDWAGGLEPWGGRSPGGVSESEAGSPLAGLDMDTFDSGFVGSDCSSPVECDFTSPGDEGPFRSYLRQWVV  
IPPLSSPGPQAS

84/105  
**FIGURE 83**

GGCACGAGGAGGTGTGGACGCTGTGTATGAAATGTCTTTCCTCCAGGACCCAAGTTTCTTCACCATGGGGATGTG  
GTCCATTGGTGCAGGAGCCCTGGGGGCTGCTGCCTTGGCATTGCTGCTTGCCAACACAGACGTGTTTCTGTCCAA  
GCCCCAGAAAGCGGCCCTGGAGTACCTGGAGGATATAGACCTGAAAACACTGGAGAAGGAACCAAGGACTTTCAA  
AGCAAAGGAGCTATGGGAAAAAAATGGAGCTGTGATTATGGCCGTGCGGAGGCCAGGCTGTTTCTCTGTGAGAGA  
GGAAGCTGCGGATCTGTCTCCCTGAAAAGCATGTTGGACCAGCTGGGCGTCCCCCTCTATGCAGTGGTAAAGGA  
GCACATCAGGACTGAAGTGAAGGATTTCCAGCCTTATTTCAAAGGAGAAAATCTTCCTGGATGAAAAGAAAAAGTT  
CTATGGTCCACAAAGGCGGAAGATGATGTTTATGGGATTTATCCGTCCTGGGAGTGTGGTACAACCTTCTTCCGAGC  
CTGGAACGGAGGCTTCTCTGGAACCTGGAAGGAGAAGGCTTCATCCTTGGGGGAGTTTTCTGTTGGTGGGATCAGG  
AAAGCAGGGCATTCTTCTTGAGCACCGAGAAAAAGAATTTGGAGACAAAGTAAACCTACTTTCTGTTCTGGAAGC  
TGCTAAGATGATCAAACACAGACTTTGGCCTCAGAGAAAAAAATGATTGTGTGAAACTGCCAGCTCAGGGATAA  
CCAGGGACATTACCTGTGTTTATGGGATGTATTGTTTCCACTCGTGTCCCTAAGGAGTGAGAAACCCATTTATA  
CTCTACTCTCAGTATGGATTATTAATGTATTTTAAATATTCTGTTTAGGCCCCACTAAGGCAAAATAGCCCCAAAAC  
AAGACTGACAAAAATCTGAAAACTAATGAGGATTATTAAGCTAAAACCTGGGAAATAGGAGGCTTAAAATTGAC  
TGCCAGGCTGGGTGCAGTGGCTCACACCTGTAATCCAGCACTTTGGGAGGCCAAGGTGAGCAAGTCACTTGAGG  
TCGGGAGTTCGAGACCAGCCTGAGCAACATGGCGAAACCCCGTCTCTACTAAAAATACAAAAATCACCCGGGTGT  
GGTGGCAGGCACCTGTAGTCCCAGCTACCCGGGAGGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGTGGAGGT  
TGCGGTGAGCTGAGATCACACCACTGTATTCCAGCCTGGGTGACTGAGACTCTAACTAAAAAAAAAAAAAAAAAAA  
AAA

85/105  
**FIGURE 84**

MWSIGAGALGAAALALLLANTDVFLSKPQKALEYLEDIDLKTLEKEPRTFKAKELWEKNGAVIMAVRRPGCF  
LC  
REEAADLSSLKSMLDQLGVPLYAVVKEHIRTEVKDFQPYFKGEIFLDEKKKFYGPQRRKMMFMGFIRLGVWYNFF  
RAWNGGFSGNLEGEFGFILGGVFVVGSGKQGILLEHREKEFGDKVNLLSVLEAAKMIKPQTLASEKK

86/105  
**FIGURE 85**

GGCACGAGGCCTCGTGCCGCCGGGCTCTTGGTACCTCAGCGCGAGCGCCAGGCGTCCGGCCGCCGTGGCT**ATGTT**  
CGTGTCCGATTTCCGCAAAGAGTTCTACGAGGTGGTCCAGAGCCAGAGGGTCCTTCTCTTCGTGGCCTCGGACGT  
GGATGCTCTGTGTGCGTGCAAGATCCTTCAGGCCTTGTTCCAGTGTGACCACGTGCAATATACGCTGGTTCCAGT  
TTCTGGGTGGCAAGAAGCTTGAAACTGCATTTCTTGAGCATAAAAGAACAGTTTCATTATTTTATTCTCATAAACTG  
TGGAGCTAATGTAGACCTATTGGATATTCTTCAACCTGATGAAGACACTATATTCTTTGTGTGTGACACCCATAG  
GCCAGTCAATGTGTCGTCATGTATACACGATACCCAGATCAAATTACTCATTAAACAAGATGATGACCTTGAAGT  
TCCCGCCTATGAAGACATCTTCAGGGATGAAGAGGAGGATGAAGAGCATTTCAGGAAATGACAGTGTGGGTCAGA  
GCCTTCTGAGAAGCGCACACGTTAGAAGAGGAGATAGTGGAGCAAACCATGCGGAGGAGGCAGCGCGAGAGTG  
GGAGGCCCGGAGAAGAGACATCCTCTTTGACTACGAGCAGTATGAATATCATGGGACATCGTCAGCCATGGTGTAT  
GTTTGAGCTGGCTTGGATGCTGTCCAAGGACCTGAATGACATGCTGTGGTGGGCCATCGTTGGACTAACAGACCA  
GTGGGTGCAAGACAAGATCACTCAAATGAAATACGTGACTGATGTTGGTGTCTGACGCGCCACGTTTCCCGCCA  
CAACCACCGGAACGAGGATGAGGAGAACACACTCTCCGTGGACTGCACACGGATCTCCTTTGAGTATGACCTCCG  
CCTGGTCTCTACCACTGCTGCTCCCTCCATGACAGCCTGTGCAACACCACTATACCGCAGCCAGGTTCAAGCT  
GTGGTCTGTGCATGGACAGAAGCGGCTCCAGGAGTTCCTTGACAGACATGGGTCTTCCCCTGAAGCAGGTGAAGCA  
GAAGTTCAGGCCATGGACATCTCCTTGAAGGAGAATTTGCGGGAAATGATTGAAGAGTCTGCAAATAAATTTGG  
GATGAAGGACATGCGCGTGCAGACTTTCAGCATTCAATTTGGGTTCAGCACAAGTTTCTGGCCAGCGACGTGGT  
CTTTGCCACCATGTCTTTGATGGAGAGCCCCGAGAAGGATGGCTCAGGGACAGATCACTTCATCCAGGCTCTGGA  
CAGCCTCTCCAGGAGTAACCTGGACAAGCTGTACCATGGCCTGGAACCTGCAAGAAGCAGCTGCGAGCCACCCA  
GCAGACCATTGCCAGCTGCCTTTGCACCAACCTCGTCATCTCCAGGGGCCTTTCTGTACTGCTCTCTCATGGA  
GGGCACTCCAGATGTCATGCTGTTCTCTAGGCCGGCATCCCTAAGCCTGCTCAGCAAACACCTGCTCAAGTCCTT  
TGTGTGTTGACAAAGAACCGGCGCTGCAAACCTGTGCCCTGGTGTATGGCTGCCCCCTGAGCATGGAGCATGG  
CACAGTGACCGTGGTGGGCATCCCCCAGAGACCGACAGCTCGGACAGGAAGAACTTTTTTGGGAGGGCGTTTGA  
GAAGGCAGCGGAAAGCACCAGCTCCCGGATGCTGCACAACCATTTTGACCTCTCAGTAATTGAGCTGAAAGCTGA  
GGATCGGAGCAAGTTTCTGGACGCACTTATTTCCCTCCTGTCT**TAG**GAATTTGATTCTTCCAGAATGACCTTCTT  
ATTTATGTAAGTGGCTTTCAATTTAGATTGTAAGTTATGGACATGATTTGAGATGTAGAAGCCATTTTTTATTAA  
TAAATGCTTATTTTAGGCTCCGTCCCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

87/105  
**FIGURE 86**

MFVSDFRKEFYEVVQSQRVLLFVASDVDALCACKILQALFQCDHVQYTLVPVSGWQELETAFLEHKEQFHYFILI  
NCGANVDLLDILQPDEDTIFFVCDTHRPVNVVNVYNDTQIKLLIKQDDLEVPAYEDIFRDEEEDDEHSGNDSGD  
SEPSEKRTRLEEEIVEQTMRRRQRREWEARRRDILFDYEQYEHGTSSAMVMFELAWMLSKDLNDMLWWAIVGLT  
DQWVQDKITQMKYVTDVGLQRHVSRRHNHRNEDEENTLSVDCTRISFEYDLRLVLYQHWSLHDSLNTSYTAARE  
KLWSVHGQKRLQEFADMGLPLKQVKQKFQAMDISLKENLREMIEESANKFGMKDMRVQTFSIHFGFKHKFLASD  
VVFATMSLMESPEKDGSCTDHFIAQALDSLRSNLDKLYHGLELAKKQLRATQQTIASCLCTNLVISQGPFLYCSL  
MEGTPDVMLFSRPASLSLLSKHLLKSFVCSTKNRRCKLLPLVMAAPLSMEHGTVTTVGIPPETDSSDRKNFFGRA  
FEKAAESTSSRMLHNHFDLSVIELKAEDRSKFLDALISLLS

88/105  
**FIGURE 87**

ACCGGGCACCGGACGGCTCGGGTACTTTTCGTTCTTAATTAGGTCATGCCCGTGTGAGCCAGGAAAGGGCTGTGTT  
TATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTCCGTGGTGCCATCTACATTTTTTGGGACTCGGGAATTAT  
GAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGGTCCTGAAATAGTCACCAATGGGGGAAAATGATCCGCCTGCT  
GTTGAAGCCCCCTTCTCATTCCGATCGCTTTTTTGGCCTTGATGATTGAAAATAAGTCCTGTTGCACCAGATGCA  
GATGCTGTTGCTGCACAGATCCTGTCACTGCTGCCATTGAAGTTTTTTTCCAATCATCGTCATTGGGATCATTGCA  
TTGATATTAGCACTGGCCATTGGTCTGGGCATCCACTTCGACTGCTCAGGGAAGTACAGATGTCGCTCATCCTTT  
AAGTGATATCGAGCTGATAGCTCGATGTGACGGAGTCTCGGATTGCAAAGACGGGGAGGACGAGTACCGCTGTGTC  
CGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTTACAGCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGG  
AAGGGTCACTACGCAAATGTTGCCTGTGCCCACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTG  
AGCTCGCTGGAGGGGCGAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA  
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCAAGTGCACAGCCTGTGGT  
CATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGTCCTTGCTCTCGCAGTGGCCCTGGCAGGCCAGC  
CTTCAGTTCCAGGGCTACCACCTGTGCGGGGGCTCTGTTCATCACGCCCTGTGCATCATCACTGCTGCACACTGT  
GTTTATGACTTGTACCTCCCCAAGTCATGGACCATCCAGGTGGGTCTAGTTTCCCTGTTGGACAATCCAGCCCCA  
TCCCACTTGGTGGAGAAGATTGTCTACACAGCAAAGTACAAGCCAAAGAGGCTGGGCAATGACATCGCCCTTATG  
AAGCTGGCCGGGCCACTCACGTTCAATGGTACATCTGGGTCTCTATGTGGTTCTGCAGCTCTTCCTTTGTTTCAA  
GAGGATTTGCAATTGCTCATTGAAGCATTCTTATGATGGCTGCTTTATAATCCTTGTGAGATATTAATAATTCCA  
ACTCCTGATTCATGTTGGTGTGGCATCAGTTGATTATCTTTTCTCATTAAAATTGTGATGCTCCTAAAAAAA  
AAAAAAA



89/105  
**FIGURE 88**

MGENDPPAVEAPFSFRSLFGLDDLKISPVAPDADAVAAQILSLLPLKFFPIIVIGIIALILALAIGLGIHFDCSG  
KYRCRSSFKCIELIARCDGVSDCKDGEDEYRCVRVGGQNAVLQVFTAASWKTMCSDDWKGHYANVACAQLGFPSY  
VSSDNLRVSSLEGQFREEFVSIDHLLPDDKV TALHHSVYVREGCASGHVVT LQCTACGHRRGYSSRIVGGNMSLL  
SQWPWQASLQFQGYHLCGGSVITPLWIITAACVYDLYLPKSWTIQVGLVSLLDNPAPSHLVEKIVYHSKYKPKR  
LGNDIALMKLAGPLTFNGTSGSLCGSAALPLFQEDLQLLIEAFL

90/105  
**FIGURE 89**

**ATGGCACAGCACGGGGCGATGGGCGCGTTTCGGGGCCCTGTGCGGCCCTGGCGCTGCTGTGCGCGCTCAGCCTGGGT**  
**CAGCGCCCCACCGGGGGTCCCGGGTGCGGCCCTGGGCGCCTCCTGCTTGGGACGGGAACGGACGCGCGCTGCTGC**  
**CGGGTTCACACGACGCGCTGCTGCCGCGATTACCCGGGCGAGGAGTGCTGTTCCGAGTGGGACTGCATGTGTGTC**  
**CAGCCTGAATTCCACTGCGGAGACCCTTGCTGCACGACCTGCCGGCACCACCCTTGTCCTCCAGGCCAGGGGGTA**  
**CAGTCCCAGGGGAAATTCAGTTTTGGCTTCCAGTGATCGACTGTGCCTCGGGGACCTTCTCCGGGGGCCACGAA**  
**GGCCACTGCAAACCTTGGACAGACTGCACCCAGTTCGGGTTTCTCACTGTGTTCCCTGGGAACAAGACCCACAAC**  
**GCTGTGTGCGTCCCAGGGTCCCCGCCGGCAGAGCCGCTTGGGTGGCTGACCGTCGTCCTCCTGGCCGTGGCCGCC**  
**TGCGTCCTCCTCCTGACCTCGGCCCAGCTTGGACTGCACATCTGGCAGCTGAGGAGTCAGTGCATGTGGCCCCGA**  
**GAGACCCAGCTGCTGCTGGAGGTGCCGCCGTCGACCGAAGACGCCAGAAGCTGCCAGTTCCTCCGAGGAAGAGCGG**  
**GGCGAGCGATCGGCAGAGGAGAAGGGGCGGCTGGGAGACCTGTGGGTTGA**

91/105  
**FIGURE 90**

MAQHGMGAFRALCGLALLCALSLGQRPTGGPGCGPGRLLLTGTGDARCCRVHTTRCCRDYPGEECCSEWDCMCV  
QPEFHCGDPCCTTCRHHPCPPGQGVQSQGKFSFGFQCIDCASGTFSGGHEGHCKPWTIDCTQFGFLTVPGNKTHN  
AVCVPGSPPAEPLGWLTVVLLAVAACVLLLTSAQLGLHIWQLRSQCMWPRETQLLLEVPPSTEDARSCQFPEER  
GERSAEEKGRLGDLWV

92/105  
**FIGURE 91**

AGTGCGCGAAGATGCGAAAGGTGGTTTTGATCACCGGGGCTAGCAGTGGCATTGGCCTGGCCCTCTGCAAGCGGC  
TGCTGGCGGAAGATGATGAGCTTCATCTGTGTTTGGCGTGCAGGAACATGAGCAAGGCAGAAGCTGTCTGTGCTG  
CTCTGCTGGCCTCTCACCCCACTGCTGAGGTCACCAATTGTCCAGGTGGATGTCAGCAACCTGCAGTCGGTCTTCC  
GGGCCTCCAAGGAACCTTAAGCAAAGGTTTCAGAGATTAGACTGTATATATCTAAATGCTGGGATCATGCCTAATC  
CACAATAAATATCAAAGCACTTTTCTTTGGCCTCTTTTCAAGAAAAGTGATTTCATATGTTCTCCACAGCTGAAG  
GCCTGCTGACCCAGGGTGATAAGATCACTGCTGATGGACTTCAGGAGGTGTTTGAGACCAATGTCTTTGGCCATT  
TTATCCTGATTGCGGAACCTGGAGCCTCTCCTCTGTACAGTGACAATCCATCTCAGCTCATCTGGACATCATCTC  
GCAGTGCAAGGAAATCTAATTTAGCCTCGAGGACTTCCAGCACAGCAAAGGCAAGGAACCCTACAGCTCTTCCA  
AATATGCCACTGACCTTTTGAGTGTGGCTTTGAACAGGAACTTCAACCAGCAGGGTCTCTATTCCAATGTGGCCT  
GTCCAGGTACAGCATTGACCAATTTGACATATGGAATTCTGCCTCCGTTTATATGGACGCTGTTGATGCCGGCAA  
TATTGCTACTTCGCTTTTTTGCAAATGCATTCACTTTGACACCATATAATGGAACAGAAGCTCTGGTATGGCTTT  
TCCACCAAAGCCTGAATCTCTCAATCCTCTGATCAAATATCTGAGTGCCACCACTGGCTTTGGAAGAAATTATA  
TTATGACCCAGAAGATGGACCTAGATGAAGACACTGCTGAAAAATTTTATCAAAAGTTACTGGAACCTGGAAAAGC  
ACATTAGGGTCACTATTCAAAAAACAGATAATCAGGCCAGGCTCAGTGGCTCATGCCTATAAATTCAGCACTTTG  
GGAGGCCAAGGCAGAAGGATCACTTGAGACCAGGAGTTCAAGACCAGCCTGAGAAACATAGTGAGCCCTTGCTCTC  
TACAAAAAGAAATAAAAAATAATAGCTGGGTGTGGTGGCATGCGCATGTAGTCCCAGCTACTCAGAAGGATGAGGT  
GGGAGGATCTCTTGAGGCTGGGAGGCAGAGGTTGCAGTGAGCTGAGATTGTGCCACTGCACTCCAGCCTGGGTGA  
CAGCGAGACCCTGTCTCAAAATATGTATATATTTAATATATATATAAAACCAGAGCTGACAATGACACTCTGGAA  
CATTGCATACCTTCTGTACATTCTGGGGTACATGGATTCTACTGAGTTGGATAATATGCATTTGTAATAAACTA  
TGAACATGAAAAAAAAAAAAAAAAAAAAA

93/105

**FIGURE 92**

MRKVVLITGASSGIGLALCKRLLAEDDELHLCLACRNMSKAEAVCAALLASHPTAEVTIVQVDVSNLQSVFRASK  
ELKQRFQRLDCIYLNAGIMPNPQLNIKALFFGLFSRKVIHMFSTAEGLLTQGDKITADGLQEVFETNVFGHFILI  
RELEPLLCHSDNPSQLIWTSSRSARKSNFSLEDFQHSKGKEPYSSSKYATDLLSVALNRNFNQQGLYSNVACPGT  
ALTNLTYGILPPFIWTLMPAILLLRFFANAFTLTPYNGTEALVWLFHQKPESLNPLIKYLSATTGFGGRNYIMTQ  
KMDLDEDTAEKFYQKLELEKHIRVTIQKTDNQARLSGSL

94/105  
**FIGURE 93**

AGCCTGGGGCGGCCGGCCAGGAACCAACCCGTTAAGGTGTCTTCTCTTTAGGGATGGTGAGGTTGGAAAAAGGCTC  
CTGTAACCCCTCCTCCAGGATGAACCACTGCCAGAAGACATGGAGAACGCTCTCACCGGGAGCCAGAGCTCCCAT  
GCTTCTCTGCGCAATATCCATTCCATCAACCCACACAACCTCATGGCCAGGATTGAGTCCTATGAAGGAAGGGAA  
AAGAAAGGCATATCTGATGTCAGGAGGACTTTCTGTTTGTGTTGTCACCTTTGACCTCTTATTCGTAACATTACTG  
TGGATAATAGAGTTAAATGTGAATGGAGGCATTGAGAACACATTAGAGAAGGAGGTGATGCAGTATGACTACTAT  
TCTTCATATTTTGGATATATTTCTTCTGGCAGTTTTTCGATTTAAAGTGTTAATACTTGATATGCTGTGTGCAGA  
CTGCGCCATTGGTGGGCAATAGCGTTGACAACGGCAGTGACCAGTGCCTTTTTACTAGCAAAAAGTGATCCTTTTCG  
AAGCTTTTCTCTCAAGGGGCTTTTGGCTATGTGCTGCCCATCATTTTCATTCATCCTTGCCCTGGATTGAGACGTGG  
TTCTTGGATTTCAAAGTGTACCTCAAGAAGCAGAAAGAAAACAGACTCCTGATAGTTCAGGATGCTTCAGAG  
AGGGCAGCACTTATACCTGGTGGTCTTTCTGATGGTCAGTTTTATTCCCTCCTGAATCCGAAGCAGGATCTGAA  
GAAGCTGAAGAAAAACAGGACAGTGAGAAACCACTTTTAGAACTATGAGTACTACTTTTTGTTAAATGTGAAAAAC  
CCTCACAGAAAGTCATCGAGGCAAAAAGAGGCAGGCAGTGAGTCTCCCTGTCGACAGTAAAGTTGAAATGGTGA  
CGTCCACTGCTGGCTTTATTGAACAGCTAATAAAGATTTATTTATTGTAATACCTCACAGACGTTGCACCATATC  
CATGCACATTTAGTTGCCTGCCTGTGGCTGGTAAGGTAATGTCATGATTCATCCTCTCTTCAGTGAGACTGAGCC  
TGATGTGTTAACAAATAGGTGAAGAAAGTCTTGCTGTATTCCCTAATCAAAGACTTAATATATTGAAGTAACA  
CTTTTTTAGTAAGCAAGATACCTTTTTATTTCATTCACAGAATGGAATTTTTTTGTTTCATGTCTCAGATTTAT  
TTTGATTTCTTTTTTAACACTCTACATTTCCCTTGTTTTTAACTCATGCACATGTGCTCTTTGTACAGTTTTA  
AAAAGTGAATAAAATCTGACATGTCAATGTGGCTAGTTTTATTTTTCTTGTTTTGCATTATGTGTATGGCCTGA  
AGTGTGGACTTGCAAAAGGGGAAGAAAGGAATTGCGAATACATGTAAATGTCACCAGACATTTGTATTATTTT  
TATCATGAAATCATGTTTTCTCTGATTGTTCTGAAATGTTCTAAATACTCTTATTTTGAATGCACAAAATGACT  
TAAACCATTATATCATGTTTCTTTGCGTTCAGCCAATTTCAATTAATAATGAATAAATTAATAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAA

95/105  
**FIGURE 94**

MNHLPEDMENALTGSQSSHASLRNIHSINPTQLMARIESYEGREKKGISDVRRTFCLFVTFDLLFVTLLWIIELN  
VNGGIENTLEKEVMQYDYSSYFDIFLLAVFRFKVLILAYAVCRLRHWWAIALTTAVTSAFLLAKVILSKLFSQG  
AFGYVLP IISFILAWIETWFLDFKVL PQEAEENRLLIVQDASERAALIPGGLSDGQFYSPPESEAGSEEAEEKQ  
DSEKPLLEL

96/105  
**FIGURE 95**

GTCGTATTTCCAAGGACTCCAAAGCGAGGCCGGGGACTGAAGGTGTGGGTGTCGAGCCCTCTGGCAGAGGGTTAA  
CCTGGGTCAAATGCACGGATTCTCACCTCGTACAGTTACGCTCTCCGCGGCACGTCCGAAGGATTTGGAAGTCC  
TGAGCGCTCAAGTTTGTCCGTAGTCGAGAGAAGGCCATGGAGGTGCCGCCACCGGACGCXGGGAGCTTTCTCTGT  
AGAGCATTGTGCCTATTTCCCGAGTCTTTGCTGCCGAAGCTGTGACTGCCGATTTCGGAAGTCCTTGAGGAGCGT  
CAGAAGCGGCTTCCCTACGTCCCAGAGCCCTATTACCCGGAATCTGGATGGGACCGCCTCCGGGAGCTGTTTGGC  
AAAGATGAACAGCAGAGAATTTCAAAGGACCTTGCTAATATCTGTAAGACGGCAGCTACAGCAGGCATCATTGGC  
TGGGTGTATGGGGGAATACCAGCTTTTATTCATGCTAAACAACAATACATTGAGCAGAGCCAGGCAGAAATTTAT  
CATAACCGGTTTGATGCTGTGCAATCTGCACATCGTGCTGCCACACGAGGCTTCATTTCGTTATGGCTGGCGCTGG  
GGTTGGAGAACTGCAGTGTGTGACTATATTCAACACAGTGAACACTAGTCTGAATGTATACCGAAATAAAGAT  
GCCTTAAGCCATTTTGTAAATTGCAGGAGCTGTCACGGGAAGTCTTTTAGGATAAACGTAGGCCTGCGTGGCCTG  
GTGGCTGGTGGCATAATTGGAGCCTTGCTGGGCACCTCCTGTAGGAGGCCTGCTGATGGCATTTCAGAAGTACTCT  
GGTGAGACTGTTTCAGGAAAGAAAACAGAAGGATCGAAAGGCACCTCCATGAGCTAAAACCTGGAAGAGTGGAAGGC  
AGACTACAAGTTACTGAGCACCTCCCTGAGAAAATTGAAAGTAGTTTACAGGAAGATGAACCTGAGAATGATGCT  
AAGAAAATTGAAGCACTGCTAAACCTTCCTAGAAAACCTTCAGTAATAGATAAAACAAGACAAGGACTTGAAAGTGC  
TCTGAACTTGAAACTCACTGGAGAGCTGAAGGGAGCTGCCATGTCCGATGAATGCCAACAGACAGGCCACTCTTT  
GGTCAGCCTGCTGACAAATTTAAGTGCTGGTACCTGTGGTGGCAGTGGCTTGCTCTTGTCTTTTTCTTTTTCTTTT  
TAAC TAAGAATGGGGCTGTTGTACTCTCACTTTACTTATCCTTAAATTTAAATACATACTTATGTTTGTATTAAT  
CTATCAATATATGCATACATGAATATATCCACCCACCTAGATTTTAAGCAGTAAATAAAACATTTTCGCAAAAGAT  
TAAAGTTGAATTTTACAGTTAAAAA



97/105  
**FIGURE 96**

MEVPPPDAGSFLCRALCLFPRVFAAEAVTADSEVLEERQKRLPYVPEPYYPESGWDRLRELF GKDEQQRISKDLA  
NICKTAATAGIIGWVYGGIPAFIHAKQYIEQSQA E IYHNRFDAVQSAHRAATR GFIRYGWRWGWRTAVFVTIFN  
TVNTSLNVYRNKDALS HFVIAGAVTGSLFRINVGLRGLVAGGIIGALLGTFVGGLLMAFQKYSGETVQERKQKDR  
KALHELKLEEWKGR LQVTEHLPEKIESSLQEDEPENDAKKIEALLNLPRNPSVIDKQDKD

98/105  
**FIGURE 97**

GCACGAGCGATGTCGCTCGTGCTGCTAAGCCTGGCCGCGCTGTGTCAGGAGCGCCGTACCCCGAGAGCCGACCGTT  
CAATGTGGCTCTGAAACTGGGCCATCTCCAGAGTGGATGCTACAACATGATCTAATCCCGGAGACTTGAGGGAC  
CTCCGAGTAGAACCTGTTACAACACTAGTGTGCAACAGGGGACTATTCAATTTTGATGAATGTAAGCTGGGTACTC  
CGGGCAGATGCCAGCATCCGCTTGTTGAAGGCCACCAAGATTTGTGTGACGGGCAAAAGCAACTTCCAGTCCTAC  
AGCTGTGTGAGGTGCAATTACACAGAGGCCTTCCAGACTCAGACCAGACCCTCTGGTGGTAAATGGACATTTTCC  
TACATCGGCTTCCCTGTAGAGCTGAACACAGTCTATTTTCATTGGGGGCCATAATATTCCTAATGCAAATATGAAT  
GAAGATGGCCCTTCCATGTCTGTGAATTTACCTCACCAGGCTGCCTAGACCACATAATGAAATATAAAAAAAG  
TGTGTCAAGGCCCGGAAGCCTGTGGGATCCGAACATCACTGCTTGTGAAGAAGAATGAGGAGACAGTAGAAGTGAAC  
TTCACAACCACTCCCTTGGGAAACAGATACATGGCTCTTATCCAACACAGCACTATCATCGGGTTTTCTCAGGTG  
TTTGAAGCCACACCAGAAGAAACAAACGCGAGCTTCAGTGGTGATTCCAGTGACTGGGGATAGTGAAGGTGCTACG  
GTGCAGCTGACTCCATATTTTCTACTTGTGGCAGCGACTGCATCCGACATAAAGGAACAGTTGTGCTCTGCCCA  
CAAACAGGCGTCCCTTTCCCTCTGGATAACAACAAAAGCAAGCCGGGAGGCTGGCTGCCTCTCCTCTGCTGTCT  
CTGCTGGTGGCCACATGGGTGCTGGTGGCAGGGATCTATCTAATGTGGAGGCACGAAAGGATCAAGAAGACTTCC  
TTTTCTACCACCACACTACTGCCCCCATTAAGGTCTTGTGGTTTTACCCATCTGAAATATGTTTCCATCACACA  
ATTTGTTACTTCACTGAATTTCTTCAAACCATTCAGAAAGTGAGGTTCATCCTTGAAAAGTGGCAGAAAAAGAAA  
ATAGCAGAGATGGGTCCAGTGCAGTGGCTTGCCACTCAAAGAAGGCAGCAGACAAAGTCGTCTTCTTCTTTCC  
AATGACGTCAACAGTGTGTGCGATGGTACCTGTGGCAAGAGCGAGGGCAGTCCCAGTGAGAACTCTCAAGACTCT  
TCCCCTTGCTTTTAACTTTTCTGCAGTGATCTAAGAAGCCAGATTTCATCTGCACAAATACGTGGTGGTCTACTT  
TAGAGAGATTGATACAAAAGACGATTACAATGCTCTCAGTGTCTGCCCCAAGTACCACCTCATGAAGGATGCCAC  
TGCTTTCTGTGCAGAACTTCTCCATGTCAAGTAGCAGGTGTGAGCAGGAAAAAGATCACAAGCCTGCCACGATGG  
CTGCTGCTCCTTGTAGCCCACCCATGAGAAGCAAGAGACCTTAAAGGCTTCCATCCCACCAATTACAGGGAAAA  
AACGTGTGATGATCCTGAAGCTTACTATGCAGCCTACAAACAGCCTTAGTAATTAAACATTTTATACCAATAAA  
ATTTTCAAATATTGCTAACTAATGTAGCATTAACTAACGATTGGAACTACATTTACAACCTTCAAAGCTGTTTTA  
TACATAGAAATCAATTACAGTTTTAATTGAAAATAAACCATTTTGATAATGCAACAATAAAGCATCTTCAGCC  
AAAAAAAAAAAAAAAA

99/105  
**FIGURE 98**

MSLVLLSLAALCRSAVPREPTVQCGSETGPSPEWMLQHDLPDGLRDLRVEPVTTSVATGDYSILMNVSWVLRAD  
ASIRLLKATKICVTGKSNFQSYSCVRCNYTEAFQTQTRPSGGKWTF SYIGFPVELNTVYFIGAHNIPNANMNEDG  
PSMSVNFTSPGCLDHIMKYKKKCVKAGSLWDPNITACKKNEETVEVNFTTTPLGNYMALIQHSTIIGFSQVFEP  
HQKKQTRASVVIPVTGDSEGATVQLTPYFPTCGSDCIRHKGTVVLCPTGVFPPLDNNKSKPGGWLPLLLLSLLV  
ATWVLVAGIYLMWRHERIKKTSFSTTTLLPPIKVLVVYPSEICFHHTICYFTEFLQNHCRSEVILEKWQKKKIAE  
MGPVQWLATQKKAADKVVFLSNDVNSVCDGTCGKSEGSPSENSQDSSPCL

100/105  
**FIGURE 99**

CAGCTTCCCACCTGGGCTTTCCGAGGTGCTTTTCGCCGCTGTCCCCACCACTGCAGCCATGATCTCCTTAACGGA  
CACGCAGAAAATTGGAATGGGATTAAACAGGATTTGGAGTGTTCCTGTTCTTTGGAATGATTCTCTTTTTTGA  
CAAAGCACTACTGGCTATTGGAAATGTTTTATTTGTAGCCGGCTTGGCTTTTGTAAATTGGTTTAGAAAGAACATT  
CAGATTCTTCTTCCAAAAACATAAAATGAAAGCTACAGGTTTTTTCTGGGTGGTGTATTTGTAGTCCTTATTGG  
TTGGCCTTTGTATAGGCATGATCTTCGAAATTTATGGATTTTTCTCTTGTTCAGGGGCTTCTTCTGTCTGTGT  
TGGCTTTATTAGAAGAGTGCCAGTCCTTGGATCCCCTCTAAATTTACCTGGAATTAGATCATTGTAGATAAAGT  
TGGAGAAAGCAACAATATGGTATAACAACAAGTGAATTTGAAGACTCATTATAAATATTGTGTTATTTATAAAGT  
CATTTGAAGAATATTCAGCACAAAATTAAATTACATGAAATAGCTTGTAAATGTTCTTTACAGGAGTTTAAACGT  
ATAGCCTACAAAGTACCAGCAGCAAATTAGCAAAGAAGCAGTGAACACAGGCTTCTACTCAAGTGAACATAAGAAG  
AAGTCAGCAAGCAAACTGAGAGAGGTGAAATCCATGTTAATGATGCTTAAGAACTCTTGAAGGCTATTTGTGTT  
GTTTTTCCACAATGTGCGAACTCAGCCATCCTTAGAGAACTGTGGTGCCTGTTTTCTTTCTTTTTATTTTGAAG  
GCTCAGGAGCATCCATAGGCATTTGCTTTTTAGAAAGTGTCCACTGCAATGGCAAAAATATTTCCAGTTGCACTGT  
ATCTCTGGAAGTGATGCATGAATTCGATTGGATTGTGTCATTTTAAAGTATTAAACCAAGGAAACCCCAATTTT  
GATGTATGGATTACTTTTTTTTGTAAACATGGTTAAATAAACTTTTGTGGTTCTTCTGAATCTTAATATTTCA  
AAGCCAGGTGAAAATCTGAAGTAGATATTCTTTGTGGAATATGCAAAGGTCATTCTTTACTAATTTTAGTTAC  
TAAATTATAGCTAAGTTTTGTGTCAGCAGCATACTCCGGAAGTCTCATACTTCTTGGGAGTCTGCCCTCCTAAGTA  
TCTGTCTATATCATTACCTACGTGTAAGTATTTAAACAAAAAGCATTCTTGACCATGAATGAAGTAGTTTGTTC  
ATAGCTTGTCTCATTGAATAGTATTATTGAAGATACTAAATGATGCAAACCAATGGATTTTTTCCATGTCATGA  
TGTAATTTTTCTTCTTCTTCTTTTTTTTTAAATTTAGCAGTGGCTTATTATTTGTTTTTCATAAATTAAATA  
ACTTTTGATAATGTTACTTTAAGACATGTAACATGTTAAAAGGTTAAACTTATGGCTGTTTTTAAAGGGCTATT  
CATTTAATCTGAGTTTTCCCTTATTTTTCAGCTTTTTTCCTAGCATATAATAGTCATTAAAGCATGACATATCCTTCA  
TATGATCACTCATCTTGAGTTAATTAGAAAATACCTGAGTTCACGTGCTAAAGTCATTTCACTGTAATAAACTGA  
CTATGGTTTTCTTAAGAACATGACACTAAAAAAAAGTGGTTTTTTTTCCACCGTTGCTGATTATTAGACAGTAGG  
AAATAGCTGTTTTCTTTAGTTTTACAAGATGTGACAGCTTTAGTGGTAGATGTAGGGAAACATTTCAACAGCCAT  
AGTACTATTTGTTTTACCCTGATTGCACTATTTTGTTTTTTAAACAGTTGCAAAGCTTTTTAATGCATAAAAGT  
ATAATTGAAATCTGTGGTATTTATTTTACAAACATGCTACAAAAATAGATTACAGCTTATTTTATTTTAGTTAA  
ATCTCTTAATACACAGAGAAGCTCCCAATCTTGCTCATCTAAATAAGGAAAGACTTGGTGTATAGTGTGATGGTTT  
AGTCTTAAGGATTAAGACATTTTTGGTACTTGCATTTGACTTACGATGTATCTGTGAAAATGGGATGATATTGAC  
AAATGGAGACTCCTACCTCAATAGTTAATGGAATAATAAGAGGCTACTGTTGTGTCTAATGTTCTTCAAAAAAGT  
AATATCCTCACTTGGAGAGTGTCAAATACATACTTTGAGGATTGACTTTATATAAGGTGCCCTGTAGAACTCTGT  
TACACATATTTTTGACCCATATTATTTACAATGCTTGATAATTCTACCTTTTTAGAGCAAGAAATAGTATCTGCT  
AATGTAAGGGACATCTGTATTTAACTCCTTTGTAGACATGAATTTCTATCAAAATGTTCTTTGCACTGTAACAGA  
GATTCCTTTTTTCAATAATCTTAATTCAAAAGCATTATTAGACTTGAAAGGGTTTGATAATCTCCAGTCCTTAG  
TAAAGATTGAGAGAGGCTGGAGCAGTTTTAGTTTTAAATGAGTCTGCAGTTAATATCAAAATGTGAGTTTGGGAC  
TGCCTGGCAACATTTATATTTCTTATTTCAGAACCTTGATGAGACTATTTTTAAACATACTAGTCTGCTGATAGA  
AAGCACTATACATCCTATTGTTTTCTTTCTTTCCAAAATCAGCCTTCTGTCTGTAAACAAAAATGTACTTTATAGAG  
ATGGAGGAAAAGGTCTAATACTACATAGCCTTAAGTGTTCGTGTCATTGTTCAAGTGTATTTTCTGTAACAGAAA  
CATATTTGGAATGTTTTCTTTTCCCCTTATAAATTGTAATTCCTGAAATACTGCTGCTTTAAAAAGTCCCCTG  
TCAGATTATATTATCTAACAATTGAATATTGTAAATATACTTGTCTTACCTCTCAATAAAAGGGTACTTTTCTAT  
CAAAAAAAAAAAAAAAAAAAAA

101/105  
**FIGURE 100**

MISLTDIQKIGMGLTGFGVFFLFFGMILFFDKALLAIGNVLFVAGLAFVIGLERTFRFFFQKHMKMATGFFLGGV  
FVVLIGWPLIGMIFEIYGFFLLFRGFFPVVVGFIRRVFVLGSLLNLPGIRSFVDKVGESNNMV

102/105  
**FIGURE 101**

ATTGATTAAAAAGAGATTGCCCTGCAAGGTAAATCAGTTAAAACCAACCTCTCCTGCCCTGAGTGGATAGGTAGG  
GTTAGGGTTGCCAGATGTCACGAAGTTACAGGATGCTCAGTTTTTAAGGTATATCCCTTATACTATAAGGGTTATA  
GTAAAAAATATTTCATTATGTGAAATTCAAATATAACTGGGTATCAGGTATTCTATGTGGCAACCCTAGGTAGGGG  
AGCACAGGTTAGGCAAGCGATTAGAAGATTTGCAGCCTCCAAAGTTTCTGCACCTCGATGGGACACTAGAACAGG  
AAGGCTCCTGGGCCTTTCTGGCTCTGGGAATGAAGCGTGGAAAACCTCCTTAGGCGGGCGCAGTGCTTCAAGTA  
GCCAAGCTCTGACTTCCGAGGGAAGAAAAGGAGGCCATGGGCCTCTGCCAGAGCCATGCTCTGCACTCTGGGGTCA  
GCAGAGTTCAAAACGACCTGCAACGTCTGGCGCTTAGCTCCTAAAGAGGTCTCCAGTCCAGCGCCGACGGCCAGC  
GGCTAGAGGCCGTCCGCCCCGACTCCAAGATGGCGCCCGCCACAGCTGCCAGGTGTTAAGATGGCGGCGCGGGGCC  
GCGCCCGCGCTCCAGGCTCTCCTCCCCAGCCTTCTCCTCGGCTGGCAGCAGCACTCGCGTAGCCGTGCGCCGAT  
TGCTCTCGGCCTGGGCAATGGTCCCGGCTGCCGGTGCAGCAGCCCGCGTCATGCGGCTCCTCGGCTGGTGG  
CAAGTATTGCTGTGGGTGCTGGGACTTCCCGTCCGCGGCGTGGAGGTTGCAGAGGAAAGTGGTCGCTTATGGTCG  
GAGGAGCAGCCTGCTCACCTCTCCAGGTGGGGGCTGTGTACCTGGGTGAGGAGGAGCTCCTGCATGACCCGATG  
GGCCAGGACAGGGCAGCAGAAGAGGCCAATGCGGTGCTGGGGCTGGGCACCCAAGGCGATCACATGGTGTGCTG  
TCTGTGATTCTGGGGAAGCTGAGGACAAAGTGAGTTACAGAGCTAGCGGCGTCACCTGTGGTGCTGGAGGAGCG  
GAGGACTCAAGGTGCAACGTCCGAGAGAGCCTTTTCTCTCTGGATGGCGCTGGAGCACACTTCCCTGACAGAGAA  
GAGGAGTATTACACAGAGCCAGAAGTGCGGAATCTGACGCAGCCCCGACAGAGGACTCCAATAACACTGAAAGT  
CTGAAATCCCCAAAGGTGAACTGTGAGGAGAGAAACATTACAGGATTAGAAAATTTCACTCTGAAAATTTTAAAT  
ATGTCACAGGACCTTATGGATTTTCTGAACCCAAACGGTAGTGACTGTACTCTAGTCTGTTTTACACCCCGTGG  
TGCCGCTTTTCTGCCAGTTTGCCCCCTCACTTTAACTCTCTGCCCCGGGCATTTCCAGCTCTTCACTTTTTTGGCA  
CTGGATGCATCTCAGCACAGCAGCCTTTCTACCAGGTTTGGCACCGTAGCTGTTCTTAATATTTTATTATTTCAA  
GGAGCTAAACCAATGGCCAGATTTAATCATACAGATCGAACACTGGAAACACTGAAAATCTTCATTTTTTAATCAG  
ACAGGTATAGAAGCCAAGAAGATGTGGTGGTAAC TCAAGCCGACCAAATAGGCCCTCTTCCCAGCACTTTGATA  
AAAAGTGTGGACTGGTTGCTTGTATTTTCTTATTCTTTTTAATTAGTTTTATTATGTATGCTACCATTTCGAAC  
GAGAGTATTCGGTGGCTAATTCAGGACAAGAGCAGGAACATGTGGAGTAGTGATGGTCTGAAAGAAGTTGGAAA  
GAGGAACCTCAATCCTTCGTTTCAGAAATTAGTGCTACAGTTTCATACATTTTCTCCAGTGACGTGTTGACTTGA  
AACTTCAGGCAGATTAAGAAGATCATTTGTTGAACAACTGAATGTATAAAAAAAATTATAAACTGGTGTTTTAAC  
TAGTATTGCAATAAGCAAATGCAAAAAATTTCAATAGATGCACTATTCTTGTTTTTTACTGCATGAACGTAATCCA  
GTATTTGGAAAGTAATCCAGTTTGAAATGTGAAGATGTATTCCGGCAGAAATAGTGAGTAGAATGACATGCTTACT  
ATACAGAAGGCAAAAATAGGACTCTCAGGTAATAGTTTAAAGGAAACCTTGATTCTTATATATGTTTAAAGAAGG  
TTAGCTTTCTGTTTCTTTGCAGTTTTTCTTCTAGAGTCCATAGCAGGAAAGTATGTAACCAGAATTGGTTAGTGT  
GACCCCTCAAGTAGCAAGTGATGGAAAAATAAGAGTCAAATACCTTGATGTTTGTGATCTCTAACTCAAAAAATT  
TGAAGTGTTTTAAAGTTGTTTCTGGGTAAGGGAGATGTTAGGAGAAAGGAAATGCTGTAACATAAGCTCAATTATT  
ATCAGTTCTATGCTAACGTATACATTTTAAATCATAGTTACCTAAGCAGCATGCATTAATTGAACCTTAAATGTT  
CCCAGCAGGCTGGTCTCAAACTGCTGACTTCAGGTGATCCACCCGCTCGGCCTCCCAAGGTGTTGGGATTGCAG  
GTGTGAGCCACTGCGCCTGGCCTAAACAAACTTTTTGAAAAGCTGTTTCTAAAAGATTCTTAAATTCAGATATG  
ACAGCTAATTACCTCATATAAATTACTTTTATAC TAATTGTTTCCAGGGTTTTAGAGTAGTTGAATGTTTATTT  
CACAAGGCACCCTAAATTCATAGAAATAAACCTCAGATGAGTCTC

103/105

**FIGURE 102**

MVPAAGRPPPRVMRLLGWWQVLLWVLGLPVRGVEVAEESGRLWSEEQPAHPLQVGAVYLGEEELLHDPMGQDRAA  
EEANAVLGLGTQGDHVMVLSVIPGEAEDKVSSEPSGVTCGAGGAEDSRCNVRESLFSLDGAGAHFPDREEEYYTE  
PEVAESDAAPTEDSNNTESLKSPKVNCEERNITGLENFTLKILNMSQDLMDFLNPNGSDCTLVLFYTPWCRFSAS  
LAPHFNSLPRAFFPALHFLALDASQHSSLSTRFGTVAVPNILLFQGAKPMARFNHTDRTLETCLKIFIFNQTGIEAK  
KNVVVTQADQIGPLPSTLIKSVDWLLVFSLFFLISFIMYATIRTESIRWLIPGQEQEHVE

104/105  
**FIGURE 103**

GGCACGAGGCCTGGGTTGCGCTGCCGGCCACGTCCCCGCGCCGGGCCTCAGGCTCCTTCCTACTGTCCGAGGGCC  
ACCAGGCCGCGGGGGCCTGCTGCGCCCGGATGCGTCTGTTACTAGAGTGGAGAGTCTACCTTCGTCTCACATGT  
GCCACAAAGGATGGCATGGCCCGGGAGTGCCCCACCACGTGGCTTTTACCCCCCTGCAAAGCCAGACTTCGCCCAG  
CGACACAGTGTCAAGCCACAGCTCTCCAAGGAGGAAGATGGTCCAGGCTGGGAGCATCCCCCTTAGCAGCAGCCT  
CTGATCCCTTGGCCAAGCAGGAGGGAACCATTAGCAGCCTGAGGAGCTGGCTGGCTGGGAGCCTCGGGGACCGCC  
CAGCCTTGCTCCCAGCTCACCCACAAGATGTGGACAGCTCTTGCTGCTCATTGATTTTCTCCTTGTCTTATCT  
GAAAGCCATGCGGCATCCAACGATCCACGCAACTTGTGCCCTAACAAAATGTGGAAGGGATTAGTCAAGAGGAAT  
GCATCTGTGGAACAGTTGATAATAAACGTCTGAGGATGTAACCATGGCAGCAGCTTCTCCTGTACATTGACC  
AAAGGGACTTCGGCAGCCCACCTCAACTCTATGGAAGTCACAACAGAGGACACAAGCAGGACAGATGTGAGTGAA  
CCAGCAACTTCAGGAGGTGCAGCTGATGGTGTGACCTCCATTGCTCCACGGCTGTGGCCTCCAGTACGACTGCG  
GCCTCCATTACGACTGCGGCCTCCAGTATGACTGTGGCCTCCAGTGCTCCACGACTGCAGCCTCCAGTACAACCT  
GTGGCCTCCATTGCTCCACGACTGCAGCCTCCAGTATGACTGCGGCCTCCAGCACTCCCATGACACTTGCACTC  
CCGCGCCCCACGTCCACTTCCACAGGGCGGACCCCGTCCACTACCGCCACTGGGCATCCATCTCTCAGCACAGCC  
CTCGCACAAGTGCCAAAGAGCAGCGCGTTGCCAAGAAGCAACCCCTGGCCACATTGGCCACACGTGCTCAGACT  
GTAGCGACCACAGCAAACACAAGCAGCCCCATGAGCACTCGTCCAAGTCCTTCCAAGCACATGCCAGTGACACC  
GCGGCAAGCCCTGTACCCCTATGCGTCCCCAAGCACAAGGTCCCATTAGCCAGGTGTCAGTGGACCAGCCTGTG  
GTTAACACAACAAATAAATCCACACCCATGCCCTCAAACACAACCCAGAGCCCGCCCCACCCACAGTGGTG.  
ACCACCACCAAGGCACAAGCCAGGGAGCCAAGTGCAGCCAGTGCCAGTACCTCACACCAGCCCAATCCCTGAG  
ATGGAGGCCATGTCCCCACGACACAGCCAAGCCCATGCCATATACCCAGAGGGCCGCTGGGCCAGGCACATCC  
CAGGCACCGGAGCAGGTAGAGACTGAAGCCACACCAGGTACTGATTCCACTGGGCCAACACCCAGGAGCTCAGGG  
GGCACTAAGATGCCAGCCACGGAATCGTGCCAGCCAGCACCCAAGGCCAGTACATGGTGGTCACCACTGAGCCC  
CTCAGCCAGGCCGTGGTAGACAAAATCTCCTTCTGGTGGTGCTGTTACTCGGGGTGACCCTTTTCATCACAGTC  
TTGGTTTTGTTTGGCCTGCAGGCCTATGAGAGCTACAAGAAGAAGGACTACACCCAGGTGGACTACTTAATCAAC  
GGGATGTATGCGGACTCAGAAATGTGAGGGGGGCGGGGGCCTGGCGGGAGGCCTGGCCCCCTTCTCGTCCTTTCC  
TTTTGCCTTTGAGACCAAACCAAGTGCTTCCAAATTCTTTTGGTGCAATTGAGGAGATATGCCAGATGCTTAAAC  
ACATTTAATTGCTGTGAGATTAATTCCATGATCACTAAAGAGTTGCTGCTTTTTTCATATTTATTTTTGTAAATG  
ATTCTGTGCCAGGAGCAGCTGGGGGTTCACCTCAGGGTGGGGCGGGCAGGACCCCGTCTCCCAGGTGTCGGA  
GCCTGACCTGAATTAAAGTACTGACTGCTCGCC



105/105  
**FIGURE 104**

MWTALVLIWIFSLSLSESHAASNDPRNFVPNKMWKGLVKRNASVETVDNKTS  
EDVTMAAASPVTLTGKTSAAHLN  
SMEVTTEDTSRTDVSEPATSGGAADGVTSIAPTAVASSTTAASITTAASSMTV  
ASSAPTAAASSTTVASIAPTTA  
ASSMTAASSTPMTLALPAPTSTSTGRTPSTTATGHPSLSTALAQVPKSSALP  
RTATLATLATRAQTVATTANTSS  
PMSTRPSPSKHMPSDTAASPVPMPRPQAQGPISQVSVDQPVVNTTNKSTPMP  
SNTTPEPAPTPTVVTTTQAQARE  
PTASPVVPVHTSPIPEMEAMSPTTQPSMPYTTQRAAGPGTSQAPEQVETEAT  
PGTDSTGPTPRSSGGTKMPATDS  
CQPSTQGQYMVVTTTEPLTQAVVDKTLVLLVLLGVTLFITVLVLFALQAYES  
YKKKDYTQVDYLINGMYADSEM